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THE

LONDON LANCET:

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HALF-YEARLY VOLUMES.

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EDITED BY

THOMAS WAKLEY, SURGEON, AND J. HENRY BENNET, M.D.

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THE LANCET.

A Journal of Medical, Surgical, and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

VOL. II. NEW-YORK, JULY, 1851. No. 1.

CLINICAL LECTURE

Delivered at St. George's Hospital,

BY CÆSAR HAWKINS, ESQ.,

SURGEON TO THE HOSPITAL,

AND VICE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

Caries and Necrosis of the Parietal Bone; Epilepsy.—Caries of the Temporal Bone; Abscess of Brain; Hæmorrhage, &c.

IT is the province of your systematic course of lectures to teach you the general principles of surgery, while in clinical lectures these principles are shown you more in detail; and in to-day's lecture I propose to explain to you something of the subject of inflammation of the bones of certain parts of the body.

You have learned, regarding this texture, that in healthy inflammation the inflammatory secretions are organized in the form of hard periosteal or osseous nodes, while in unhealthy inflammation there are formed soft nodes, containing a glairy transparent fluid or pus. You know that caries is analogous to unhealthy ulceration in the soft parts,—it may be weak or phagedænic, strumous or syphilitic,—and, finally, that with or without caries there may be the death of the inflamed parts, which exfoliate, or separate in larger pieces, constituting necrosis.

You are familiar with the subject of caries, as it is seen in the cancellous structure of the carpus or tarsus, or in the heads of the long bones, whence the joints so often become diseased, and also as you witness it in the disease of the spinal column; but there are some parts in which caries and necrosis are more rare, and of much importance, and in no part of greater interest than in the bones of the cranium, which I will first bring under your notice in two cases now in the hospital.

The first case for our consideration is that of Elizabeth M——, aged 51, admitted November 13th, who tells us that last May twelvemonth she began to suffer from violent pain in the right temple, whence it extended to the top of the head on the same side, and that she had previously been labouring, as she called it, under debility, without apparent cause. About a month afterwards, she perceived a swelling near the seat of pain, which was opened at the Chelsea Dispensary in the following October, and some thin fluid escaped, the pain being then relieved. Last May she had a fit of epilepsy, and has continued to have fits ever since, and that more frequently in the last two or three months, the fits occurring at intervals of about a fortnight, and lasting from a few minutes to nearly half an hour, but without the convulsions being very severe; and they are unattended with much stupor. She has nearly lost the use of the left or opposite arm to the seat of disease, and says she had some numbness in it previous to the first fit; but on examination, it appeared that there is no palsy of the limb, but that the hand and wrist are stiff and useless from inflammation —perhaps rheumatic—in the carpal joints. She suffered much from a cough, but says she has had it for twenty years; she is thin and emaciated, with a feeble and rapid pulse, without fever, and not much pain in the head. Two ulcers in the scalp led down to the same part of bone, the upper and anterior border of the right parietal, a narrow bridle of skin separating them; the bone was dead, and had a thin, black, and very fœtid discharge from around it.

I requested Dr. Nairne to see her at first for her cough, which slowly improved, but has never left her, and appears to be only bronchitis, though her aspect is a very suspicious one.

On the 18th, five days after her admission, she had a slight fit, and I divided the band of skin across, which it is always right to do in cases of necrosis of the cranium; it takes away some tension, and so far relieves irritation, and by dividing this band you also save some skin to fill up the hole, for it is sure to be ulcerated away if left, and when divided the two ends retract to a certain degree, and are preserved.

Dec. 6th.—She had another fit, her cough being now less, and her health a little better. On the 17th, finding the bone apparently loose, I removed it; it was worm-eaten on the outside and smooth on the inside, where it had been attached

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to the dura mater, and was about an inch long, and as broad as the end of the forefinger. I did this, you may remember, with great gentleness, inserting the end of an elevator under one side and another under the other, moving them alternately and slightly, lest the edge of bone should be tilted in upon the dura mater; and yet you may have learned a lesson of caution in the case as to meddling with dead bone of the head whenever force is required; for our notes of the next day remark that she had two fits on the evening of the day in which the bone was taken out—one at seven o'clock, and the other at ten—partly, no doubt, from a little fright, but in part also probably from the operation, slight as it seemed, for she also suffered from pain in the head.

On the 20th she was perfectly quiet, the pulse natural, and the dura mater granulating healthily.

Jan. 6th.—She again had two slight fits. But why, you may ask, should this take place after the removal of the dead bone? The cause was evident on looking to the exposed dura mater; for a little yellow, unhealthy ulcer appeared in the middle of it, the size of a small pea. It got well again under the use of solution of caustic, and by giving a little wine, with sarsaparilla and iodide of potassium, her health also improved, and she was able to get up from her bed.

At the end of the month she was weakened by an attack of diarrhœa, and from this cause on the 30th she again had a fit, and a similar spot of ulceration was observed, whilst the rest was cicatrizing, the new skin passing from the scalp downwards over the surface of the dura mater. Now it is again more healthy.

In such cases as these, then, the danger arises from the effects on the brain, and hence they are most frequently seen under the physician's care, unless some injury has been known to have been the cause, or the bone requires surgical attendance, as in M——.

Sometimes there is pretty acute inflammation of the brain. A man, for example, was admitted under the physician some years ago, who had been ill with pain in the head for eight months, and three times he had had epilepsy, and for a week before I saw him he had been nearly in a state of coma. It then appeared that his attack followed a blow on the head, and I was asked to attend him; he was insensible, with dilated pupils, and a perfectly passive state of his limbs, and his pulse was under 50. Finding some little swelling over the right parietal bone, I made an incision down to the bone, which had the effect of rousing him to look up, though not to answer questions. I bled him, and administered calomel, and in a few days he was much better. He had one relapse, though not to the extent of becoming comatose, and bleeding and calomel again restored him. A fortnight after this he again became ill, but it was with delirium and half mania, for which three or four grains of morphia were given daily, and in a short time he got well, and continued so a year afterwards.

More often, however, the inflammation of the bone is of a chronic character, and the symptoms of cerebral affections are those of irritation or congestion rather than of inflammation. The effect of the bone itself is seen in this cranium, which is covered with small ulcerated depressions inside and out, over its whole extent, some parts having apertures through the bone; it is probably the result of syphilis. In this cranium again a nearly similar condition has been produced by a blow, and an attempt was made by the surgeon to relieve the symptoms by an incision at one part, but matter was found after death below the bone at another part. You cannot wonder that operations are of little avail in such cases as these, where hardly a portion of all the cranium is unaffected. But at the same time, the fatal effects of confined matter are seldom seen, especially if any of the bone dies, for little perforations generally take place in different places around it, through which the pus within the bone escapes, and in which you may see it rising at every pulsation of the arteries of the brain, or at every cough or deep expiration. In strumous cases you may see the caries in circular spots, as in this cranium, which was taken from a patient of mine, who died of disease of the hip-joint; the deposit was in complete tubercles both on the inside and the outside; one or two were even in the sphenoid bone, radiated depressions marking where the tubercular matter had been deposited.

The symptoms of inflammation of the cranium may be either entirely local and external; or they may influence the nerves in their passage through the bone without any cerebral affection; or, thirdly, the brain may be affected with or without local pressure on the nerves in their course.

A child, about ten years old, was admitted into the hospital under my care, with an immense collection of pus without any pain, in contact with the bone or pericranium over the whole head, completely distending the occipito-frontalis muscle from the occipital ridge to the forehead, and from one ear to the other, which was the consequence of a fall some time before. I made a small opening on one side, and pressed the matter gently from all parts to this opening, and used a bandage afterwards to keep the parts in contact. The case was sufficiently healthy to have adhesion take place very shortly, and no part whatever of the bone exfoliated, except a very small piece just under the lancet puncture. Frequently you may find the probe touch the surface of the bone for several inches, and yet if you do not expose it more than you can help, the pericranium will again come in contact with and adhere to the bone, without any exfoliation.

In the next place, as to the effect upon the nerves alone: a man was in the hospital with chronic disease of the sphenoid and temporal bones without any cerebral affection, in whom complete loss of sensation and of motion on one side of the face marked the affection of the fifth and seventh nerves, while some ulceration of the Schneiderian membrane, and of the conjunctiva, showed the effects of loss of sensibility in the

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delicate surfaces. I remember a man, whom I saw many years ago in the Middlesex Hospital, in whom all the first seven nerves of one side of the head were affected by syphilitic inflammation of the bones; he had neither smell, nor sight, nor taste, nor hearing, nor feeling in any part whatever of the left side, while these senses were perfect in the other half; the eye was immovable and fixed from palsy of the third, fourth, and sixth nerves; and the whole face and the muscles of the lower jaw were paralyzed, and the face œdematous; the eighth and ninth nerves alone were unaffected, the cerebral functions having up to that time been unimpaired.

Generally, however, the brain becomes affected at some time or other,—sometimes only producing epilepsy, as in M——; but often the mental functions are weakened; there is general torpor of mind and body; the memory fails, and the speech is imperfect; or complete coma indicates more complete compression by temporary congestion, or permanent and fatal pressure.

A woman, who probably had chronic inflammation from syphilis, was under my care, having a curiously misshapen head, from lymph and serum in the front of the right side of the head, and in the back part of the left. One day she was suddenly attacked with insensibility and paralysis of the left side of her body and face, and loss of sight, for a time, in both eyes, and of hearing in both ears. She was very near dying in this attack, but recovered from it, and went out well, except having nearly complete deafness of both ears still remaining.

A Jew dentist was under my care, more or less for about eight years, who had a small hole in the palate, and a carious spot in one clavicle, from a node; he had once some discharge from the ear with palsy of the portia dura, and deafness of that side permanently. When I first saw him he was suffering from incessant sickness, which had on several occasions, in the previous year and a half, lasted for two or three weeks at a time, and had been treated as dyspeptic. His friends were much astonished when I ordered a bladder of ice to be applied to his head, which, however, relieved the vomiting, for it was a cerebral symptom, accompanied by much pain of the head, arising from chronic inflammation of the cranium, not only of one temporal bone, but of many other parts of the skull, both within and on its outer surface, in which, after death, roughness and depressions marked where the disease had been, with thickness of the bones and of the dura mater. In the course of his illness he had at one time partial loss of power over the lower limbs and bladder, but not of long duration; and becoming reduced in circumstances, he finally died in this hospital, of abscess in the hip-joint, which lasted about six months. There had been no disease going on in the head for a considerable time before he died.

I have already mentioned something of the treatment of the more acute form of disease; but venesection and mercury, to affect the system, are of course not to be thought of for chronic cases, as far as the bone itself is concerned, particularly when caries and necrosis are present; nor is it often that even cerebral symptoms require such active measures. Far more often, cupping or a few leeches afford all the depletion that is requisite; and blisters to the nape of the neck, or now and then a seton, are more frequently required than any loss of blood at all. The treatment is, on the whole, not unsatisfactory, if the affection is tolerably limited in extent; and iodide of potassium, with bark or sarsaparilla, offers you the most efficacious remedy, whether the case be syphilitic or not in adults, for the original cause is not of much importance, a state of cachexia being present in all, otherwise the disease would not exist. Sometimes, however, a few grains of Plummer's pill may be added to, or substituted for, the iodide; and sometimes small doses of bichloride of mercury are of service, with a tonic, as an alterative, taking care not to salivate the patient. When nodes are present, the firmer they are in texture, the more likely is a mercurial to be useful; and it is scarcely ever desirable when soft nodes are formed, or the suppuration is accompanied by caries. If much irritation is present, moderate doses of opiates are of service, and this remedy, with blisters, are to precede the use of iodide or tonics, if the pulse is quick and irritable, with flushing of face and excitement of the nervous system. The diet is of course to accord with either of these different states; and complete rest in the horizontal posture, with the head raised, or going out in the air as much as possible, may each be necessary at different times in the same case. I am not now speaking of scrofulous caries, which occurs in young persons for the most part, for whom cod-liver oil, steel, air, and good living, are by far the most appropriate treatment.

Your local measures must vary according to the state of the parts. Suppose there are hard periosteal nodes in the inflamed bone; you may have the part shaved, and apply blisters, if the constitutional treatment does not check their increase; and if the pain is very great, an incision gives very great relief, but is seldom required. If there are soft nodes of moderate extent, you need do little locally; it is surprising how quickly several apparent abscesses will have the fluid absorbed, and the pericranium again fixed to the bone, in a few days after you have given iodide of potassium, with some tonic, especially if there is a syphilitic poison still in the system; so also will some scrofulous nodes, if the cheesy matter is not very abundant. If the fluid is slow in being absorbed, you may often hasten the cure by the local application of iodine and iodide of potassium lotion, painted over the swelling, or hydrochlorate of ammonia lotion. Do not open the collection of fluid hastily, for, if expose, dthe inflamed or carious bone will die. If, however, the fluid is rapidly formed, it will separate the pericranium from the bone to a great extent, which you can avoid by removing the tension by means of a small puncture, which you allow to heal again. If, again, the swelling is tense, and

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the skin is beginning to redden, a similar small puncture takes away irritation, while your medicine is acting on the system. If, however, the proportion of pus to the glairy fluid secreted under inflamed periosteum is considerable, yon cannot avoid a permanent opening as long as the bone remains diseased.

The separation of dead bone in the cranium is generally a slow process, and you cannot do much to hasten it. It is, as we have seen, not often that the pus secreted by the dura mater is confined, but if symptoms indicate such an occurrence, it would of course be right to employ the trephine. It is astonishing to see how little irritation of the brain is excited by very large pieces of dead bone, even when almost the whole frontal and both parietal bones are dead, as I have myself seen, and that for many years together.

I have already spoken of the caution to be observed in forcibly removing the necrosed bones, the effect of which you can understand, from seeing how little interference occasioned some irritation in M——, although the bone was so small. But in some cases you can do much good by dividing the dead bone by a cutting forceps, or Hey's saw, or cutting off any edge of bone by which it is imprisoned. A woman was in the same ward as this patient, whose arm I was obliged to amputate on account of disease of the elbow; she also had necrosis of two-thirds of the frontal bone, and four years afterwards, the dead bone appearing insulated, though quite fixed by its irregularities, I got a bone forceps between it and the dura mater and divided it across. I remember it was so hard that one piece flew off over one or two adjoining beds when it was divided; probably some years' inconvenience was thus saved. I have only one more remark to make at present—namely, that the dura mater is thickened in these cases of chronic inflammation, so that there is no fear of hernia cerebri from its exposure as in cases of recent injury.

M—— has since left the hospital, with very little tendency to epilepsy, for several weeks.

One of the cranial bones, the temporal bone, requires some separate consideration, as it is very often attacked by caries, which is occasioned in many instances by inflammation of the lining membrane of the meatus and tympanum, to which these parts are peculiarly liable from contact with the atmospheric air.

Of this you have an example in the case of William W——, twenty-three years of age, in Winchester ward, who was admitted Feb. 5th. It seems that he has been subject from his childhood to some purulent discharge from the right ear, varying in amount, but never absent entirely. Three years ago, an abscess formed, which burst into the meatus, having been situated probably beneath the mucous membrane only, for such abscesses are very common in these cases of chronic inflammation, as you might expect. A week ago he perceived a swelling behind the ear, which extended upwards and downwards to some distance, giving him much pain, so that he could not sleep at night, till some morphia was given him after admission. He is a pale, thin, consumptive-looking young man, but has no cough, and has had no fits or cerebral affection, and is quite deaf on the affected side, except to the ticking of a watch, held close to the ear.

The abscess was punctured by the house-surgeon the next day, and when I saw him on the following day, I enlarged the orifice, as the pus, which was very foul and offensive, did not readily escape. The bone was felt exposed, and the probe passed deeply into the ear, and probably into the tympanum, but I did not examine the ear minutely, for fear of irritating it.

Here then you have a good deal of suppuration, separating the auditory tube from the bone, which is itself diseased, if not dead at some part. He was directly relieved from much suffering, and already, in four days, there is hardly any discharge from the abscess behind the ear, and the periosteum, being not allowed to come in contact with the bone, will again adhere to the part which is not diseased, though separated from it by the pressure of the pus.

The inflammation he has so long been subject to is of a scrofulous nature, as you would suppose from his appearance. The discharge, in such cases, is partly purulent, partly cruminous and epithelial, while the bone is unaffected, and is exceedingly offensive in many cases; and in scrofulous families when no other symptom is present, you will often see parents and children, alike complaining of ear-ache, and abscess, or discharge. I know an instance in which a lady died of abscess of the brain connected with the ear, and no less than seven of her children have had discharge from the ears, the membrani tympani being perforated by ulcerations in, I think, four of them, and in one, very alarming cerebral symptoms have been sometimes present.

The disease is to be checked and cured chiefly by internal remedies,—cod-liver oil, steel, and such remedies more particularly. You should, if there is much discharge, inject warm water very gently, daily, or on alternate days, as the thick secretions lodging in the ear are themselves irritating to the surface. Do it very cautiously, however, for intense pain for several hours may easily be excited by using any force with the syringe. I do not feel the same fears which some persons entertain, from endeavoring to check the discharge, while it is perfectly free from acute symptoms, and while your alterative and tonic medicines are exerting a beneficial influence on the system. Doubtless you may see alarming or fatal symptoms succeed the sudden stoppage of the discharge, and astringents improperly used may do harm; but in many cases, where blame is attributed to mild injections, a diminished suppuration is the consequence and not the cause of internal mischief, just as a wound of the scalp dries up, if suppuration takes place below the cranium. A solution of a grain of sulphate of zinc to an ounce of water may be dropped into the ear, or two grains of lunar caustic, with much advantage, when the internal ear is not affected, or the inflammation active.

What the ultimate result of so long continued a

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disease may be in reference to our patient, it is impossible to say; but looking to his apparent constitution, it may easily terminate as in this preparation on the table.

In this case, the patient, twenty-seven years of age, nearly the same as in W——, was admitted under my care on February 26th, a few years ago, with purulent discharge from the right ear, deafness, pain in the head, and other symptoms of inflammation of the brain, of moderate severity, which commenced six months previously. The discharge became in March very copious and fœtid, and mixed with blood, both from the ear and Eustachian tube, and at the end of the month there was some oppression of the brain, with local paralysis of the muscles supplied by the right portio dura. In April the malleus and stapes came away entire, and on June 7th, copious hæmorrhage from the ear was the immediate cause of his death, phthisical symptoms having in the meantime much reduced his strength.

You may see the upper suface of the right temporal bone carious and cribriform; it was dark coloured, and the dura mater was adherent to it, inflamed and sloughy, and in part absorbed. Just above this the under surface of the cerebrum was sloughy, and the cerebral substance around softened, with a small quantity of foul pus. On the posterior surface of the petrous portion was a small quantity of ivory deposit. The groove for the lateral sinus was partially carious, and the sinus at that part was inflamed, and almost sloughy, but without any opening in its coats. Around the carotid artery, where it ascends by the side of the sella turcica, was a small quantity of effused blood, but whence it had proceeded could not be ascertained. The bony floor of the meatus and tympanum was absorbed, and there was a large quantity of foul bloody matter in the cavity which was thus formed, which communicated with the joint of the lower jaw, the condyle of which was almost wholly absorbed. The lungs were filled with tubercles, some forming abscesses, and there was recent lymph in the mediastinum, and old adhesions of the pleura. The peritonæum was also studded with tubercles, and the intestines adhered together. The state of the lateral sinus shows you the danger of absorption of matter, and formation of secondary abscesses, and in another preparation on the table you may see the sinus completely obliterated by inflammation.

Some gentlemen present may perhaps remember the case from which this preparation was taken, a patient of Mr. Tatum, September 6th, 1848, aged sixteen, in whom inflammation had begun two months previously, which soon produced deafness, for which the membrana tympani had been twice punctured without relief. The portio dura became affected, and numerous abscesses formed, having dead bone exposed in them in the situation of the mastoid process. She became very weak and restless, and on January 11th had a fit, followed by delirium, altered voice, and dilated pupil, and she died on the 19th.

The caries is the most extensive I have ever seen, affecting the squamous, mastoid, and petrous portions of the temporal bone. The anterior portion of the mastoid process is quite destroyed, as also were the styloid, vaginal, and auditory processes of this bone; no trace of the stylo-mastoid foramen could be observed; the ulceration did not encroach on the occipital bone; that portion of the mastoid element which forms the floor of the lateral sinus was ulcerated to the extent of an inch in length and three-quarters of an inch in breadth, the sinus itself being almost impervious from effusion of lymph into its cavity. Nearly the whole of the base of the petrous portion was destroyed, and the cavity of tympanum laid open. The back part of the glenoid cavity, the commencement of the zygomatic process, and the lower part of the squamous portion, were also very extensively ulcerated. The dura mater covering the bone was very vascular; the right middle lobe of the brain was more vascular, and softer than natural; lymph was found in the cavity of the arachnoid, and in the subarachnoid areolar tissue at the base of the brain.

Observe how rapid the progress of this remarkable case was as compared with our patient W——, and notice the recent characters of the cerebral inflammation, and contrast what I have just read with the appearance of the cyst of this large abscess of the brain, the size of an apple, which communicated with the tympanum, in a boy eight years of age, the thickness of which shows you that it must have been long formed, being firm, and tough, and lined with a blackish sloughy membrane; it followed discharge from the ear of several years' duration, and you may examine the carious condition of the bone corresponding to it in the Museum.

You may find many such cases as these in Dr. Abercromby's work, or Dr. Bright's, and in other medical writings, and in some of these cases perhaps a chronic abscess in the brain may have itself caused perforation and caries of the temporal bone in trying to make its way outwards; but in almost all the ear is first affected, and the brain secondarily. Where such a complication as this exists, the patient is necessarily exposed to sudden danger from any injury or impairment of the health, and a fatal result rapidly follows the previously chronic form of disease.

For example, a man was admitted many years ago under my care, three weeks after a blow, which he received by knocking his own head against a door while endeavouring to strike another man, with whom he was quarrelling. This was followed by intense pain over the head and delirium, in which he made several attempts to destroy himself. He died three days after his admission, having become comatose a few hours before his death. A large sloughy abscess occupied the anterior and middle lobes of the brain, communicating with the carious openings into the tympanum, which you may here see. He had, as in the other cases I have related, been subject for several years to discharge from one ear, which occasionally ceased, and when stopped he became

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very deaf. Doubtless, the abscess had existed for some time, and discharged itself through the bone, but was suddenly inflamed by the blow, and made quite gangrenous on its inner surface.

Lectures
ON
SOME OF THE MORE IMPORTANT POINTS IN SURGERY.

(Delivered before the Medical Society of London.)

By G. J. GUTHRIE, Esq., F.R.S.,
Late President of the Royal College of Surgeons of England; Consulting Surgeon to the Westminster Hospital, etc.

Treatment of strictures of the urethra; muscular fibres of the base of the bladder and the urethra; structure of the neck of the bladder; enlarged prostate not more common in the aged; suppression of urine; intervention of the peritonæum between the bladder and rectum; length and diameter of portions of the urethra—its voluntary and involuntary muscles.

Mr. President:—I have selected for the subject of this my third lecture one of the most important points in anatomy and surgery—important from the investigations lately made in anatomy, which I shall bring before you, and from the facts to which I have to claim your attention in an especial manner in surgery. It is not my intention to enter into any perfectly acknowledged points in anatomy, or any controversial ones in surgery; but to renew and establish if possible, those great principles which ought to guide surgeons in the present day in the treatment of irritable and intractable strictures of the urethra; and which perhaps the great opportunities I have had for observation may, in some measure, entitle me to attempt.

When Professor of anatomy and surgery to the Royal College of Surgeons of England in 1830, I demonstrated, in the lectures I then gave on the Anatomy and Diseases of the Bladder and Urethra, that the outer layer of the muscular coat of the bladder, or its longitudinal fibres, did not terminate at the neck of the bladder, as was then taught, and as it is even now very generally stated to do by those who have not minutely attended to this subject; but were inserted behind into a tendinous line, attached to but short of the posterior part of the base of the prostate, immediately beneath the *uvula* of the bladder; from which spot a strong band of fibres was often continued on, not only into the prostate gland, but as far forwards as the verumontanum. This fact Mr. Adams, in the article "Prostate" in Dr. Todd's "Cyclopædia of Anatomy and Physiology," has from inadvertence attributed to my friend Mr. Harrison, by whom it has also been described in the article "Bladder." It belongs, however, to my old pupil and friend, Mr. Hancock, now surgeon to the Charing-cross Hospital, and myself since 1830. He has lately perceived under the microscope, that these fibres are even continued on the under surface of the gland to the urethra, and has further shown that these minute fibres, which are in all instances apparent under the microscope, not only enter largely into the composition of the prostate, but surround the orifices of the ejaculatory, and all the various ducts opening into this as well as all other parts of the urethra; being with all the muscular fibres of the bladder, of the *involuntary* or nucleated kind, in opposition to those of the *voluntary* species, which are *striated* or *striped*. On the anterior part, the longitudinal fibres descending from the bladder cover and lie upon the sides of the prostate, into which they are inserted, as well as into one or more tendons, usually two, formed on the upper part, which although they are often called ligaments, ought to be regarded as the proper tendons of the bladder, and are inserted into the pubes near the symphisis. When these muscular fibres contract, which they do independently of the will of the individual, they diminish the length of the bladder, compress it against the pubes and thus aid in expelling the urine. If the attachment which the pelvic fascia descending from the pubes has to them be dissected off, some fibres will be seen passing backwards in a radiated form to the fore part and sides of the prostate; being the fibres mentioned by Winslow, Blandin, and other anatomists, as having been seen, but not shown in their engravings of these parts; any more than those longitudinal ones which I have described as passing, from the bladder, and compressing the sides of the prostate in a more decided manner than has been usually suspected.

The internal layers of the muscular fibres of the bladder are also involuntary or nucleated, like those of the stomach and intestines, their average diameter being $\frac{1}{5}\frac{1}{0}$th of an inch. They run in a transverse, spiral, and even oval direction, communicating frequently with each other near the cervix, so as to be in parts nearly inseparable. They are mostly found in bundles of various sizes, each having its system of minute capillary vessels exceedingly characteristic of muscular fibre, and are best seen from the inside of the bladder. When thickened, they project into its cavity, forming strong bands covered by the mucous coat, which is, in its natural state, of a pale straw colour, to both of which I shall presently allude. These internal fibres have been hitherto supposed to terminate at the part where the bladder joins the urethra, both in the male and female. The microscope has however shown in the hands of Mr. Hancock and Mr. Hogg, who assisted him in all his investigations, and it is confirmed by Mr. Quekett, that they are continued in a layer, invisible to the naked eye, from the bladder, being separated from its mucous coat by the elastic areolar tissue, on to and along the urethra to its extremity; to which it thus gives a muscular covering. This in its passage to and around the membranous part of the urethra, is united with the longitudinal layer lying underneath and forming a part of the prostate; thus giving when united, a muscular covering distinct from, and which may not be mistaken for the com-

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pressor muscle, the complete structure of which I first publicly demonstrated in my lectures in 1830, and which is of the voluntary or striated kind, a marked distinction existing between them.

On reaching that portion of the urethra, to which, at its under part, the bulb is attached—that is, after it passes through the deep fascia of the perinæum—this thin layer of muscular fibres divides—one portion continues on to the extremity of the urethra, lying between it and the corpus spongiosum, by which it is surrounded, some fibres extending into the papillæ on the surface of the mucous membrane. The other portion runs on, or lies upon the surface of the outer corpus spongiosum, separating it from its fibrous covering, to which it adheres very intimately, and is continued forward to the orifice of the urethra. In their course these fibres invest the spongy portion of the bulb, the urethra, and the glans penis, entering very largely into the formation of that peculiar structure found at the orifice of the urethra, constituting, according to Mr. Hancock, an additional sphincter muscle to those already described as existing in various parts of the body. The arrangement of the fibres at this spot is well shown in a preparation made from a fœtus of six months. It will thus be seen that the corpus spongiosum urethræ lies between two layers of involuntary muscle, the one separating it from the urethra, the other from its fibrous investment—an arrangement which also obtains in the glans, by which means the spongy texture, besides being largely supplied by nerves, lies between involuntary muscular fibres, even where it covers the extremities of the corpora cavernosa, and Mr. Quekett has traced them into the substance of the corpus spongiosum in the rhinoceros, the elephant, and the horse, as well as in man. This must doubtless exert great influence upon the expulsion of the blood from the spongy tissue when erection of the organ is no longer required, as well as upon the acceleration of the passage of the urine along the urethra, and the ejection of the last drops.

The contraction of the internal layer will enable us to account for the differences in the size of the urethra, which have at times been observed in disease, but which could not be well explained by elasticity of structure alone.

I have made many attempts to discover muscular fibres around the neck or opening of the bladder which might act as a sphincter, but have not succeeded in showing any in so satisfactory a manner as would enable me to suppose that they effected this object. It may therefore be believed that the portion of the bladder surrounding the opening into the urethra possesses but little muscular contractility, whilst it is endowed with a singular degree of elasticity, that it retains for some time after death which may be termed *vital*. This is easily demonstrated by stretching the part, the elasticity being dependent on the yellow elastic fibre shown by the microscope as entering into the structure of the bladder, and particularly of its cervix.

The muscular fibres of the bladder in the female follow the same course as in the male, and the microscopical researches of Messrs. Haneock and Hogg have shown that a similar arrangement of them takes place in the female urethra, on all points that its conformotion will permit, and particularly, in its course to, and at the orifice.

The neck of the bladder as it is commonly termed, is a mere ring little broader than the thickness of the bladder itself. The abruptness with which the opening commences when viewed from within, appears to warrant the acceptation of the term, neck, on the under part of which the little eminence called the *uvula* is situated. When this part loses some of the elasticity with which it is endowed, and which like all other parts of the body it does with age, or from internal changes, the consequence of disease, it becomes harder and contracted, constituting a stricture or firm contraction, resembling in many respects that almost cartilaginous structure which often takes place in the urethra. I first pointed out this alteration, which had been previously considered as a complaint of the prostate gland, with which it is not connected, as well as the appropriate means of cure by operation. A great mistake had been previously committed, and indeed now continues, that an enlarged prostate is a very common disease of old men, and particularly of the part called its third lobe. In my lectures delivered in 1830, I declared this error to be one of those which still existed in modern surgery. The point, I am happy to say, has of late been closely investigated by the surgeons of the Royal Naval Hospital, Greenwich; and Sir John Liddell, Dr. Beith, and indeed all of them assure me, that on the examination of the bodies of most of the old men who die there,—and from two to three hundred or more die annually of old age,—the enlargement of the prostate, and especially of its third lobe, is not commonly found in them; thus confirming and indeed establishing the fact stated by me in 1830, whilst it adds to its value, by proving that the changes which do take place in these parts, often admit of more relief from art than they were formerly supposed to be capable of receiving.

If the bladder be cut across transversely at its lower part, a space will be seen behind, of a triangular form, evidently whiter in colour and of a more condensed structure; the apex of which is formed by the orifice of the bladder, whilst its base is marked by a strong whitish-coloured band, which passes transversely across from side to side. The ureters open near the two extremities of the band, the distance between them being about an inch and a quarter, the other two sides of the triangle being generally of the same extent. Their orifices are surrounded by a peculiarly condensed and somewhat inelastic substance which lies beneath the mucous lining of the bladder, between it and the internal muscular coat, which substance appears to be continuous with the orifice of the bladder, and to constitute the elastic membrane of the urethra. The ureters enter obliquely, surrounded by the muscular fibres of the bladder; their orifices are small, always open, and are not easily dilated. I ventured to assert, in the lectures al-

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luded to, that the opinions entertained upon the manner in which the functions of the ureters were performed were erroneous; that the muscular fibres surrounding the ureters were not intended to prevent the urine from flowing back from the bladder into them; but that this mechanism was intended to compress the ureter at its neck, just below its orifice, for the purpose of preventing more urine from flowing in and distending the bladder until it ruptured, or the urethra gave way, provided the exit of the urine from it were impeded in any part of its course.

The ureter opens on a condensed and somewhat inelastic structure, in order that the orifice may be constantly patulous; and the obliquity of its passage, through and between the muscular coats of the bladder, is for the purpose of giving facility to its being pressed upon and closed when the viscus is in a distended state, in order to delay, if not to prevent, the further flow of urine into it from the kidney. When the bladder is contracted, and empty, the urine passes readily into and gradually dilates it, until the desire for expulsion comes on, and leads to its evacuation. A little more or a little less seems to have no influence in preventing the urine from finding its way in, the weight of the columns descending from the kidney readily overbalancing, to a certain point, the resisting power of the coats of the bladder. When the bladder is distended, it no longer yields easily, the ureter is pressed upon by the muscular wall in its passage through it, and the further entrance of urine is in a great measure prevented. If the obstruction be long continued, the ureter above this part is gradually dilated from the size of a crow-quill to that of a man's thumb, and even larger; the pelvis of the kidney increases in size, a low or chronic inflammation is induced, the secretory organs are pressed upon, and partially removed, so that the kidney may become at last an almost empty bag, separated by partitions, indicating only the former existence of its lobes. A total suppression of the secretion may, under such circumstances, take place at any time. The most remarkable example of the kind which has come under my observation, occurred in the case of a lady who suffered from a cancer of the uterus; the disease, after a time, extended towards the ureters, which at last were embraced and pressed upon by it as they entered the bladder. The lady, as this took place, began to suffer more from derangement in her urinary apparatus; the bladder was found ultimately, on passing the catheter, to contain little or no water; she fell into a state of low fever, became paralytic, afterwards comatose, and died. On examination, the orifices of the ureters were found in a sound state, although the ureters were impervious at the part where they were grasped by the diseased structure; above this they were greatly enlarged, and the kidneys were much diseased and sacculated. The peculiar manner in which the ureters enter into the bladder is, then, an admirable provision of Nature for the purpose of preventing too great a distention of the bladder rather than of the ureters, for Nature can accommodate herself for several days to a complete suppression of the secretion of urine, and for a very long time to a partial secretion of it. The natural quantity usually secreted varies from two pints to two and a half in the twenty-four hours, and when an obstruction takes place in the urethra, preventing its evacuation, the bladder may become considerably distended; but the same quantity will not be secreted during the second twenty-four hours as in the first, and there will be still less during the third, before which time relief ought to be given by operative means, if it should not occur otherwise. This provision of Nature is therefore intended, I apprehend, to protect as far as possible the bladder and urethra, rather than the constitution of the patient; the bladder, or rather the urethra, being more susceptible of mischief in a shorter time than the system at large. The two bands on the triangular space, described erroneously by Sir C. Bell as being muscles of the ureters, are composed of white inelastic, but not muscular fibres, which keep the part fixed, and strengthen and raise it up when necessary.

The triangular space is highly sensible, the nerves being directed to, and communicating more particularly on it, as they descend on each side, from the inferior mesenteric and the hypogastric plexus, and from the third and fourth sacral nerves. It is therefore very excitable, and when irritated, gives rise to the desire to evacuate the bladder, as well as sometimes to very great pain, as all have experienced who have suffered from stone in this viscus The idea entertained by some surgeons, that a bougie touches this part on entering the bladder, and in this manner gives rise to the desire which is usually experienced to pass the urine, is certainly erroneous; for when a healthy bladder contains a moderate quantity of fluid, a bougie can only touch the very apex of this space on its entrance into the bladder; and observation has led me to believe that this desire takes place rather at an earlier period, when the instrument has entered that part of the urethra which is surrounded by the prostate. In a healthy state of the bladder, it enlarges considerably downwards towards the rectum when moderately distended, and the triangular space descends, rendering it nearly impossible for a bougie to touch more than the apex of the triangle, unless it be curved backwards at the extremity. The triangular space, or trigone, rests on the rectum, and the bladder is punctured through it when that operation is done, but which I do not recommend to your attention, believing that it ought to be superseded in almost every case by others, which will be noticed in their proper places. The operation of puncturing the bladder through the rectum was founded on the supposed anatomical fact, that the triangular space rested on and closely adhered to the rectum, so that the urine would flow directly from one part into the other, without escaping into the neighbouring structures. The peritonæum, however, instead of passing down behind the bladder, and between it and the rectum to the base of the triangular

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space, and there terminating in a cul-de-sac, does sometimes pass on farther, between the triangular space and the rectum, and even occasionally as far forwards as the prostate gland; so that by puncturing through the rectum, the general cavity of the peritonæum will be opened in such cases before the bladder is penetrated, and the patient must be lost, from the urine finding its way into the peritonæal cavity; and giving rise to an inflammation which has always been destructive whenever this kind of effusion has taken place, and from whatever cause. I am not aware of there being any signs by which this conformation can or cannot be distinguished, and consequently the safety of the patient depends not on the knowledge and ability of the surgeon, but on the more usual formation of the part on which the operation is performed, being present.

The corresponding portion of the bladder, on its anterior part, is in a similar although more certain manner, devoid of peritonæum, and has been made the subject of an operation by puncture above the pubes. This operation is altogether objectionable, except in some few cases of enlarged prostate, and ought only to be performed when the bladder is manifestly distended, and an operation is absolutely required to give relief.

The anatomical fact of the anterior and lower part of the bladder being uncovered by peritonæum when the organ is much distended and elevated in the abdomen, has lately been doubted; and it is supposed that the bladder can only be punctured by a trocar which has twice passed through the peritonæum, thereby opening the cavity of the abdomen, and in all probability destroying the patient. This would be the case, provided the bladder were so thickened that it could not be dilated by the influx of water into it; but as this does not usually occur, and the bladder does become distended, the operation for the time succeeds, and the anatomical doubt may be considered an error under such circumstances.

When the elastic structure at the neck does not yield to the pressure usually exercised by the muscular coats of the bladder, in consequence of its being the seat of commencing disease, the transverse and longitudinal fibres are called upon to act with a greater degree of vigour, and in certain cases during the augmented action, the mucous coat becomes distended by the urine, yields, and protrudes externally between these muscular fibres. The commencement of a vesical pouch is thus formed, which goes on increasing, if the same causes continue which gave rise to it, until it attains considerable magnitude. The opening between the muscular fibres by which it began, is usually of a small size, leading to a large cavity, into which a stone may pass, and be fortunately shut up so as to give rise to no farther inconvenience, and to the belief that the stone has been dissolved or passed. In other instances, the opening may be so large, and in such a situation, as to admit of the stone being struck by the point of the sound, although it will not be readily discovered or extracted after the operation for its removal has been accomplished. In all cases a quantity of urine may and will be received in these pouches, and various secretions may be poured into, and retained in them. If the bladder be emptied by the catheter in the erect position, and the patient be made to change it by lying down, retaining the catheter in its place, an additional quantity may run from the instrument, showing that one or other of these pouches has been emptied.

In such cases a smart blow is often felt on the instrument, coeval with the termination of the flow of urine. Sometimes the stroke is repeated twice, or even three times. The blow thus given will sometimes force the catheter, when slightly held, from between the finger and thumb, at least two inches out of the urethra. It is, however, deficient in the sound which a solid, hard substance gives, the tick, as it is often called technically, and leads to the conclusion that it must occur from a pouch falling against the instrument, and in which pouch there may or may not be a stone. Sometimes the blows on the catheter resemble more the blows given by the wings of a bird in fluttering, so that I have been in the habit of calling them the *fluttering strokes of the bladder*, believing that they depend on some unusual or irregular action of or near the base of the triangular space. The blows resemble that from a solid substance, although the grate which a stone gives, or ought to give, to either a silver, a steel, or a gum-elastic catheter, is wanting, and is never felt except when the last drops of urine are flowing, so that the patients themselves frequently observe it, and ask the cause.

The actual length of the urethra is a matter of little importance, being dependent very much on its pendulous part in the male, and on the size of the individual pelvis, some urethræ measuring after death eleven inches, others only seven or eight, although in a state of health a catheter seven inches in length will usually empty the bladder. A surgeon should never calculate by inches in passing an instrument, but by the principal points of attachment, which may be considered as so many beacons or landmarks to guide him in its passage. The only mistake of importance is frequently made with respect to that portion of the urethra which is within the external layer of the deep fascia of the perinæum, and which includes the membranous and prostatic parts, the former being commonly six or eight lines, or about half an inch long, the latter, perhaps, about an inch during life, although, when removed from the body, they can be elongated to a greater extent. Sir E. Home estimated the length of the prostatic portion at half an inch; the membranous part at an inch and a half. Camper and Portal gave an inch and a half to the prostatic part, and an inch to the membranous. Petrequin, Lisfranc, and the latest French anatomists, reckon the prostatic portion as differing from about half an inch to three quarters, or from eight to eleven lines, in different persons. The late Mr. Briggs, who took some pains to obtain a correct estimate, allowed an inch and three quarters for both. M. Malgaigne admits thirteen lines,

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or a little more than an inch. Mr. Adams, in the article Urethra, in Dr. Todd's "Cyclopædia," gives from twelve to fifteen lines in the prostatic part alone. Silver or elastic catheters for common use need never be more than *ten* inches long. When the prostate is enlarged, they may be twelve, and every surgeon should have a silver one of fourteen. Long catheters for ordinary purposes are principally useful to the makers by increasing the cost of them, but not otherwise.

(To be continued.)

A Clinical Lecture
ON A
CASE OF PUERPERAL COMA.

Delivered at the Westminster Hospital,

By HAMILTON ROE, M.D.

Gentlemen,—The subject for our consideration to-day is the case of Sarah J——, which excited a good deal of interest at the time she was under treatment. The particulars of it are as follow:—

Sarah J——, aged twenty-one, of fair complexion, light hair, pallid colour, and pregnant more than seven months of her first child, was admitted into the Westminster Hospital on the 29th of October, 1850, complaining of violent pain in the upper dorsal vertebræ, some pain of the loins, and of the inside of the arms and thighs, nausea, want of appetite, thirst, habitual costiveness of bowels, and bad taste in her mouth. Her pulse was 108, soft; the action of the heart quickened, but its sound not altered; skin cool; tongue rather furred; senses undisturbed; sleeps well; no pains or uneasiness about the uterus, nor any discharge therefrom. When put into bed, she lay with the abdomen thrown forward, and the head and pelvis backward. She stated that she had enjoyed good health till about ten days ago, when she caught cold, as she supposes, from leaving off her drawers, and was seized with a pain in the upper part of her back, which soon became so violent as to oblige her to send for her usual medical attendant, who told her that her complaint was rheumatism, and that her state of pregnancy was not the cause of it. She was ordered to take comp. ipecacuanha powder, ten grains, on going to bed, and an ounce of the mixture of iodide of potassium every four hours.

Oct. 30th.—Slept well; pain continues as violent as ever; is lying in the same position. Continue the mixture; take also half a drachm of Battley's solution at bedtime.

31st.—No alteration in her pain or posture. Repeat the mixture, and take on going to bed chloride of mercury, two grains, with opium powder, a grain and a half; and in the morning half an ounce of castor oil

Nov. 1st.—Slept very badly last night; bowels slightly moved by the oil; pain increased and constant: complains of pain between the shoulders; moans a great deal, but whether from impatience of temper or suffering it is not easy to decide, as she does not look ill; her skin is cool; pulse 96; tongue furred. Repeat the mixture, and on going to bed administer an injection composed of almond emulsion, two ounces; Battley's solution, two scruples.

2nd.—Slept much better; the pains were relieved for some hours by the enema, but they returned this morning; appetite bad; says her bowels have not been freely opened since her admission. To take powdered aloes, scammony, and gamboge, three grains of each, to be made into two pills, and taken immediately.

3rd.—Bowels much purged by the pills; complains of great pain across the sacrum and down the thighs, but says the pain in the dorsal vertebræ is less violent; moans constantly; countenance anxious, but not unhealthy-looking; tongue red; no uterine pains or discharge. Ordered, comp. ipecacuanha powder, six grains; rhubarb powder, four grains; to be made into pill, and taken every four hours so long as the diarrhœa continues.

4th.—The immoderate action of the bowels was soon checked by the pills; pain of the dorsal vertebræ less violent, ceasing at intervals, and then returning; pain across the sacrum gone; urine high coloured, but clear. To take a mixture of rhubarb and carbonate of soda, as circumstances may require. No perceptible change took place in her symptoms from this day till the evening of the 7th of November, when she became very restless, her skin hot, face flushed, and pulse accelerated. She complained of uneasiness in the region of the bladder, her urine was therefore drawn off; it smelt offensively, and was in quantity about eight ounces, and very dark coloured, probably from blood being mixed with it. She slept from time to time, but whenever she awoke she appeared incoherent. To take two grains of chloride of mercury every four hours, and half a drachm of Battley's solution at night. Repeat the lotion.

The draught caused some apparently sound sleep; but on the morning of the 8th, when Mr. Barlow saw her, she was comatose, and unable to swallow. He was so good as to come up to me about half-past nine o'clock, to inform me of her condition, and, at my request, he called on Dr. F. Bird, our lecturer on midwifery, to ask him to see the case with me. I felt confident her pregnancy did not directly cause her symptoms, but I was anxious to have the assistance of a physician-accoucheur in such a case, as well as of my colleagues. I saw her myself soon after twelve o'clock; she was then lying on her back with her eyes closed; pupils somewhat dilated; face flushed; pulse accelerated and full; heart's action natural; respiration without stertor. She appeared insensible, but moved her arms frequently and her legs occasionally. She could not swallow without great difficulty. Half a pint of albuminous urine recently drawn from her was shown me, which contained red particles in abundance, and presented all the conditions of urine observed in dropsy after scarlet fever, a disease in which the kidneys become congested, and thus deprived of the power

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of performing their proper functions in a perfect manner. As the escape of the albumen by the urine commonly co-exists with the presence of urea in the blood, the discovery of it shed a new light upon the case, and led at once to the recognition of what probably was the immediate cause of the symptoms presented throughout the whole of the attack. It evidently pointed to renal mischief; and assuming as one of the results of such a state that urea was circulating in the blood, the occurrence of convulsions and coma was no longer left unexplained.

It was now clear, as will be hereafter explained, that she must be delivered as soon as possible, and it was a question whether she should not also be cupped on the loins or on the temples. I therefore consulted with Dr. Basham on this point, and we agreed it could do her no harm to have her cupped on the temples, but Mr. Phillips and Dr. F. Bird coming in soon after, and wishing me to defer that operation till after she was delivered, I consented to do so. At about half past one o'clock, Dr. Bird ruptured the membranes, and suggested that half-drachm doses of ergot should be given her every half-hour. We agreed to meet at half-past four o'clock to deliver the woman, and then left her, having placed her on her side to prevent the gravitation of the blood to the posterior part of the lungs. We had ascertained that the child was alive, from the pulsation of its heart. When I arrived at the hospital, at half-past four, I found that she was much worse, and had not been delivered; her coma was still more profound, her face more flushed, skin hotter, and the pulse still full; the pulsations of the fœtal heart were distinctly heard. The child's head had descended so low down that the forceps could be easily applied to it; this was done by Mr. Barlow, and the woman was delivered in a short time of a healthy living child, apparently about eight months old; the placenta was not long retained, but its expulsion was followed by the gushing out of a considerable quantity of blood; this, however, was soon stopped by dashing cold water on the woman's abdomen, and firmly grasping and compressing the uterus over the pubis. She seemed so exhausted by the loss of blood, though the quantity of it was much less than what is often lost under similar circumstances, that I gave up the idea of cupping her, and left her without any hope that she would recover. She became gradually worse, and died at a quarter to three o'clock on the morning of the 9th.

Let us now review this case from its admission to its termination, examine the principles on which it was treated, and learn the important lesson in what respect the treatment of this woman might have been improved, if we could have ascertained the real nature of her case at its commencement. Unfortunately we could not obtain permission to make a post-mortem examination, therefore we can do no more than speculate on the probable cause of her early symptoms. On her admission, her advanced state of pregnancy made us fearful that the violent pain of which she complained might be connected with it, and be the forerunner of premature delivery; but after a careful consideration of her symptoms, we decided that these apprehensions were groundless, and for the following reasons: First, the position in which she lay caused the abdominal muscles to press as strongly as possible on the enlarged uterus, and therefore she would not have assumed it had not that organ been quiet. Next there was no discharge of any kind from it, or uneasiness in it. The cause of the pain must therefore be looked for elsewhere. Inflammation of the vertebræ themselves might have produced it, but there was no redness, heat, or swelling over them, and had there been inflammation of the spinal cord or canal, in all probability, paralysis or spasmodic action of some of the muscles supplied with nerves from the affected part, with fever, would have been manifested. As none of these symptoms were present, we concluded that this was not the cause. The pain might have been rheumatic or neuralgic; it was improbable that it was rheumatism, because there was no similar affection of any other part of the body; it might, however, be neuralgic. The only other cause which we could conceive likely to produce this violent, but in a certain sense intermitting pain, was flatulence from constipation of the bowels, and as there was no clear indication as to which of these two causes had induced the pain, a mixture of hydriodate of potash and bicarbonate of potash, medicines possessing considerable power over neuralgic affections, were given her, with opium, in the form of Dover's powders and Battley's solution, by the mouth and by injection. Finding that no permanent relief was afforded by this plan of treatment, continued for four days, purgative pills were administered, with no better success, though they acted rather more powerfully than was desirable. The excessive action of the bowels was soon checked by rhubarb and Dover's powders, and we suspended all decided modes of treatment, watching for some clearer indication of the cause of her symptoms. On the evening of the tenth day from her admission, the uneasiness about the bladder, of which she complained, and her extreme restlessness, suggested the propriety of drawing off her urine. Up to that time, it had been clear, but high coloured; on that occasion, for the first time, it was offensive, and contained a quantity of blood. This was the first indication of the real nature of her disease. To relieve her restlessness, a dose of opium was given her, and a spirit lotion was applied to her head. On the next morning, she was comatose. I saw her soon after twelve o'clock on that day, and then the state of her urine and the appearance of her countenance so closely resembled what I had observed before in cases of kidney affection which I had formerly had in the hospital, that I felt pretty sure she was labouring under the same condition. One of these cases was a boy about fourteen years of age, who had bloody urine after an attack of scarlet fever. He was cupped over the loins, took tartar-emetic, and went out appa ently well. In a fortnight afterwards, however, he re-

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turned, complaining that his urine had again become bloody, and in spite of the employment of the same remedies he became comatose on the fourth day, his face flushed, his skin hot, and his pulse quicker and fuller than natural. He died in about thirty-six hours. His kidneys were found enlarged and much congested; the state of the urine in this instance indicated the cause of the cerebral symptoms. Another was that of a female, thirty-two years of age, who was admitted labouring under symptoms of dyspepsia and gastric irritation. She appeared to be gradually recovering her health, when she became insensible so suddenly, that the nurse in attendance supposed she was asleep. Her countenance was pale; pulse 92, quiet and feeble; skin cool and moist; respiration without stertor, but accompanied by puffing of the lips; heart's action natural; pupils not dilated, acting freely when light was brought near them; the temporal artery was opened, and ten ounces of blood were abstracted, but not the slightest consciousness returned; three ounces of high-coloured urine were then drawn off, which became cloudy by the addition of nitric acid. She had three or four slight attacks of convulsions of the upper extremities, and died in about eighteen hours from the time when the cerebral symptoms appeared. The left kidney was much enlarged, flabby, and pale; its upper portion contained cartilaginous deposit; its lower was irregularly granulated and mottled. The right kidney was much smaller; its proper tunic scarcely separable, and its whole surface granular. It was the peculiarity of the cerebral symptoms in this instance which indicated the diseased state of the kidneys. This case was published, with all its details, accompanied by some valuable observations, in the *Medical Gazette* of 1840, by Dr. Frederick Bird, who was then clinical assistant to the physicians of this hospital.

The coincidence of kidney disease with coma in a pregnant woman showed the identity of this case with puerperal convulsions—a disease which Dr. Lever was, I believe, the first to point out as generally, if not always, accompanied by albuminous urine—the only difference between them being, that in the one case, coma; in the other, convulsions, indicated the presence of cerebral affection. It was clear, therefore, that the treatment recommended by the best authorities for puerperal convulsions ought now to be adopted—viz., tartar-emetic, bloodletting, and delivery. Medicine, however, could not be given her, as she swallowed with great difficulty. Dr. Basham and I had determined on cupping the woman on the temples, but I deferred that operation until she had been delivered, at the suggestion of Mr. Phillips and Dr. Bird, first because the coma had been of several hours' standing, and the brain was, in all probability, much injured; secondly, I had never seen any good effect produced by taking blood from the head in cerebral affections caused by kidney disease; nor can we feel surprised at this when we remember that the brain in such cases is affected, not by ordinary congestion, but by urea, which remains in the blood, because the diseased state of the kidneys prevents them from excreting it; and lastly, because I knew that in many cases convulsions had ceased immediately after delivery, which, in her circumstances, might be expected speedily to take place. Dr. Blundell, speaking on this subject, says: "It may happen that on making an examination you do not find a single symptom of labour. The fœtus is unapproachable; the uterus is shut, and there is perfect freedom from uterine pains. Sooner or later, however, if the fit continue, parturition commences of itself, without the interference of the accoucheur, and the womb opening, the membranes protruding, and the liquor amnii flowing, a sudden emersion of the fœtus occurs." But the patient was too ill to be suffered to wait for such an occurrence. Dr. Bird therefore made an examination, and finding the membranes presenting, he ruptured them, and we then left her for a time.

When I arrived at the hospital, at half-past four o'clock, I found a strong opinion prevailing, in which, it is almost unnecessary to state, neither Dr. F. Bird nor any of my colleagues participated, that this woman's recovery was utterly hopeless, and, therefore, that for the sake of saving the life of the child, the Cæsarian operation ought to be performed. I could not for a moment doubt the unlawfulness of taking such a step, but I was desirous that you, gentlemen, should have the advantage of hearing Mr. Phillips' opinion. I sent to ask him if he could without inconvenience come down to the hospital, feeling sure he would agree with me as to the impropriety of the operation. He was, however, attending upon a case of severe illness, which he could not leave. The poor woman's state was now too urgent to admit of the delay which must be occasioned by sending for others of my colleagues, and waiting their arrival. I therefore decided at once against the operation; and to guide your judgment under similar circumstances, I shall now give you my reasons for doing so, namely, I did not believe the recovery of this woman to be utterly hopeless, and therefore could not consent to the performance of an operation proposed on the grounds that she was so. Next, the child's life was not in my opinion in such peril as to justify us in performing a dangerous operation on the mother, for the sake of saving it. Again, it was by no means certain that the operation would save the life of the child, if performed whilst the mother was living, and it might, nay, probably would, save it, if performed immediately after she was dead. It was probable, also, that delivering the woman might save both mother and child; but my strongest objection to the operation was grounded on the conviction, that no man was justified in increasing the peril to a woman's life or diminishing the chances of her recovery for the sake of saving her child.

That this woman might recover I inferred from what every man who has ever been engaged in midwifery practice knows, that many women do recover from puerperal convulsions. A case of recovery was mentioned to me by Mr. Tebay,

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when this poor woman was being delivered. A patient of his, aged thirty, pregnant nearly nine months, was frightened by the discharge of a gun whilst she was witnessing a theatrical performance, went home, and shortly after became comatose. He bled her without any relief—next day she continued in the same state, and had several attacks of convulsions with a full incompressible pulse. She was now bled to forty ounces, and cold lotions were applied to the head; in the course of the evening uterine action came on, accompanied by groans recurring at intervals, and restlessness. The child was expelled in the usual way, without any assistance. During the first twenty-four hours after her delivery, her coma became more profound, she lay in a state of stupor, and remained for several days in an almost idiotic state; nevertheless, in about three weeks she was restored to tolerable health.

Several cases of recovery from puerperal convulsions have been patients of the Maternity Charity, whom some of the pupils of this hospital may probably have seen. One was a woman in York-street, between thirty and forty years of age, who had puerperal convulsions when in labour with her first child, and albuminous urine. She was bled; the child was got out, the convulsions ceased immediately, and she recovered. The next was a cobbler's wife, in Bell-street, Vincent-square, not thirty years of age. She had puerperal convulsions and albuminous urine when in labour with her first child. She was delivered naturally and recovered. Another was a woman who resided in an alley in Toothill-street, and was attended by Anderson the midwife. She was only eighteen years of age, and had albuminous urine and convulsions in her first labour. She was cupped on the loins and temples. The child was born during a convulsion, and the next day the urine ceased to be albuminous. A Mrs. V——, who was attended by Mr. Nott, one of our pupils, had convulsions and albumious urine when in labour with her tenth child; she recovered also. A woman in New Tothill-street had convulsions and albuminous urine with her first child; she was delivered naturally, and recovered. These cases have been furnished to me by Dr. F. Bird.

In the "Icones Obstetricæ" of Mr. Streeter, to which we shall afterwards have occasion to refer, a statistical table is given of labours complicated with convulsions, from which it appears, that of 144 cases, 114 lived; and of the whole number, 118 were first pregnancies. The table is so interesting that I shall give you its details:—

Authority.	Number, Nature, and Termination of cases					Period of First attack			Nature of Delivery.						Children, and Kind of Presentation.					
	Women.	Died.	Single Births	Twins.	First Pregnancies.	the labour Before.	the labour During.	the labour After.	By Natural Efforts.	Artificially	Version.	Forceps.	Crotchet	Children.	Children Saved.	Vertex.	Breech.	Feet.	Upper Extremity.	
Dr. Jos. Clark	19	4	15	4	16	17		2	10	9	None	3	6	23	Not stated	23	None	None.	None.	
Dr. Rob. Collins	30	5	28	2	29	4	24	2	15	15	None.	6	8	32	14	31	None	1	None.	
Dr. Merriman	36	8	34	2	28	33		3	18	18	3	7	8	38	13	36	None.	None.	None.	
Dr. F. H. Ramsbotham	58	13	56	3	45	17	28	14	38	21	5	6	6	62	23	58	4	None	None	
Total	144	30	...	...	118	...		...	81	63	8	22	28	132	50					

With the knowledge furnished from all these sources, it is clear we had no right to act as if this woman must die.

The chances of the child's life being saved by delivery were considerable. Dr. Collins records thirty cases of puerperal convulsions, in which fourteen children were delivered alive; but four of these were twins, and therefore should only be counted as two; we must say, therefore, that twelve children out of thirty survived. According to the table I have just given you, 125 women had 132 children, of whom fifty were saved, but of these seven were twins; deducting these, we have forty-three children saved. Adding this number, we find 155 women had fifty-five children saved. This calculation is not accurate, as the table is not complete; but it is sufficiently so to show that we were not justified in believing that the child in this case would die, if it were not saved by the Cæsarian operation. That the operation might not save the life of the child, if performed whilst the mother was living is clear from the statistical reports of it. Dr. Churchill, in his work on midwifery, states, that of 182 cases which occurred since 1750, fifty-seven children were lost, or one in about 3¼. According to this calculation, the chances that this child would be saved by the operation were not four to one. In Michaelis' collection of cases, sixty-three out of 110 children were taken out alive which made the chances of saving a child not three to two. Adding these sums together, we find that the whole number of children saved by 292 operations were 188, whilst 104 were lost, which made the chance of the child being saved by an operation, in this case, about nine to five—not quite two to one.

The life of the child might be saved by the operation, if performed immediately after the mother's death, or within twenty minutes, according to the authority of Dr. Blundell. Foderé gives

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several cases of children who have been extracted from their mothers' wombs after their death, and have lived. Sprengill gives many instances of the same kind, and quotes authors who state that children have lived who were taken out twenty-four hours after their mothers had ceased to live. This, however, is not credible.

In the English edition of the "Icones Obstetricæ," edited, with Practical Remarks and Statistics, by Mr. J. S. Streeter, in 1842, we find the following important observations:—

"Cases requiring the Cæsarian operation are of two kinds—first, where it is performed as a means of saving the child immediately after the death of the parent, from disease or accident; and, secondly, where it is performed during the life of the mother. The operation, in the first instance, must be undertaken immediately after the maternal circulation has ceased, because the functions of the placenta cannot abate till the action of the lungs begins. Dr. Jackson is stated to have recovered an infant half an hour after the death of the mother, (Burns's 'Principles of Midwifery;') but this is longer than the possession of vitality in the child can be calculated upon generally.* Mr. Hugh Carmichael informs us, that in two instances where the child was removed in less than fifteen minutes after that event it was perfectly dead; and in Dr. Ireland's case, where the death of the mother occurred from a blow, when the child was exposed eight or ten minutes after the mother's circulation had ceased, it was already sinking, and required exertions to resuscitate it; but the child so saved was alive twenty-three years after. (*Dublin Medical Journal*, vol. xiv.)†

"Its employment during the life of the mother is only admissible where the abridgement of the pelvic space is so great as to prevent any reasonable hope of extracting the child, however mutilated, with safety to the mother *per vias naturales*. It is an operation, not of choice, but of necessity, never to be thought of without a thorough conviction, that unless risked two lives must inevitably perish, while there is a *possibility* that by its means both may, and a great probability exists that one will, be preserved. A deformed pelvis, admitting delivery by embryulcia where the vertex presents, may, if complicated with a breech or a shoulder presentation, constitute one of impracticable labour. Whenever this most formidable operation is clearly the only resource, the woman should never be allowed to go on making long-continued and fruitless uterine efforts, because they exhaust the constitutional powers, and lead to rupture, destructive local inflammation, or even gangrene. This injurious delay lessens the chance of preserving the child, and has probably been the cause why the operation has been almost universally fatal in Britain, while recoveries are frequent on the Continent, where ecclesiastical influence encourages the patient to submit to the operation before the powers of the constitution are impaired, and before the parts have been exposed to the deleterious effects of pressure."

That the mother and child might both be saved by delivering the woman, is clear from Dr. Bird's cases, as well as from numerous others.

That no man is justified in performing an operation on a woman which diminishes the chances of her recovery for the sake of saving her child is, I think, clear from the law of the land, from the practice of the most respectable members of the profession, and from the sense of right and wrong which every man possesses. By the laws of England it is unlawful to do bodily harm, much more by any act to endanger life, and therefore all operations are forbidden by the letter of the law, and those only are sanctioned by its spirit which are performed on persons whose lives we have good grounds for believing would otherwise be lost, and by these means may be saved. The Cæsarian operation, therefore, unless it has for its object the saving of the life of the woman operated upon, is evidently contrary to the spirit as well as letter of the law, and I believe a man might be tried and punished for a misdemeanor for performing it with any other view.

It is contrary to the opinions and practice of the highest authorities on midwifery. Desormeaux says it may be performed on the dead or on the living, when it is clear the delivery cannot be accomplished by the natural passages. Dr. Blundell says the common sense of mankind is agreed upon the principle of its ever being our duty, in the first place, to preserve the lives of both the parent and the child; in the second, to preserve the life of the parent; and in the third place, that of the child; and the practice of the respectable part of the profession is in strict conformity with these opinions, for the Cæsarian operation is never performed by them upon a living woman unless there is such a narrowing of her pelvis—that is, unless the size of the opening is less than an inch and a half, that the child cannot be extracted through it, whereas it is an everyday occurrence to destroy the child, and take it out piece-meal, rather than endanger a woman's life by performing this operation. Surely, if the sense of right and wrong would prevent a man from performing an operation which he knew would kill a woman for the sake of saving her child, the same principle should equally prevent him from doing anything to a woman which can endanger her life for the same object. All this reasoning, however, has been grounded on the assumption that the Cæsarian operation endangers a woman's life. Let us examine the proofs that it does so. The consequence which so often results from opening the peritoneal cavity, and the improbability that a highly injected organ like the impregnated uterus can be wounded with

* Since then, on referring to Dr. Jackson's work, I find the case was wrongly quoted, both by Merriman and Burns. Dr. Jackson extracted the child by forceps about a quarter of an hour after the mother's death, and another quarter of an hour elapsed before it gave signs of life. It therefore inculcates the necessity of instant operation.

† A highly instructive case, where the Cæsarian operation was performed by Mr. J. H. Green, Surgeon of St. Thomas's Hospital, upon a woman who died in consequence of rupture of the liver, shortly after being run over by a stage-coach, in the ninth month of pregnancy, will be found in the *Medico-Chirurgical Transactions*, vol xii. The operation was commenced thirteen minutes after the death of the mother. The child, when taken from the womb, was apparently dead. After fifteen minutes of artificial inflation of the lungs with a tracheal pipe, it gave signs of life, and was finally resuscitated, but died the following day."

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impunity, or when wounded will heal kindly, would lead us to expect it to do so; but the statistical tables of the operation prove that it is almost always fatal. Dr. Churchill gives cases which occurred before and since 1750. Taking those which have been operated upon since that period, as being most worthy of credit, we find that of 321 women, 149 recovered, or one in 2.15. According to this calculation, the chances that this woman would die if the operation were performed were more than two to one.

Mr. Phillips has kindly furnished me with the following statistical statement respecting this operation, derived from various sources:—Of 36 women operated upon in hospitals, 25 died; of 60 operated on privately, 29 died. In Michaelis' collection of cases, of 110 women, 62 died. Adding these numbers together, we find that of 206 women operated upon, 116 died, or about three out of five.

I have now given you my reasons for objecting to the Cæsarian operation, and you can yourselves judge of their validity. When we went up-stairs at half-past five o'clock, we found the child living, and its head so low down that the forceps could easily be applied to it. This was done, and in a few minutes we had the satisfaction of seeing the woman delivered of a living healthy child. Thus it was satisfactorily proved that the expectation of the child's life being saved without our interference was well founded, and that the operation would have been unnecessary. I must not omit to remind you, that it is during first pregnancy that convulsions have been most frequently observed to occur, and that they did so in the present instance. You will therefore see the importance of being particularly careful to watch the symptoms of women under such circumstances. The question which was put to me by one of the most intelligent of our pupils whilst this woman was in labour—whether the urea circulating in the mother's blood was not likely to kill her child, is satisfactorily answered in the negative, by her having been delivered of a healthy child; and the reason that it did not do so was, that there is no direct communication between the blood of the mother and that of the child.

It remains now for us to point out to you how this woman ought to have been treated, could we have known at her admission the real nature of her illness and anticipated its issue. We are unable to say whether her early symptoms were caused by disease of the kidney, because her urine being reported to be clear but high coloured, was not suspected to contain albumen, and therefore was not tested for it. On the evening of the tenth day, however, the bloody appearance of the urine clearly indicated a congested state of the kidney, the first stage of Bright's disease; and then if it could have been foreseen that coma would so soon supervene, she ought to have been bled generally, or topically, and have taken tartar-emetic; and if in spite of this treatment coma had come on, her delivery ought to have been hastened, provided that could have been done according to the wise directions of Dr. Blundell. "If, without bruising, tearing, or otherwise injuring the genitals, you can abstract the ovum, do so if you please; but if you find the case is such that you cannot deliver without risk of injury, then leave the system to its own resources, for in my mind it is far better that the woman should die convulsed in the hands of nature than she should perish by the cruel and savage operation of rough and unskilful midwifery."

But when I saw her on the eleventh day, the cerebral affection had been existing many hours, and the coma was so profound that I did not think, nor do I now think, bleeding would have removed it; nevertheless were a similar case to occur again, I should have recourse to bleeding if it were for no other purpose than that of affording me the satisfaction of believing that no means had been omitted which could possibly promote her recovery.

The treatment of most of the women who have recovered from puerperal convulsions has been tartar-emetic, bleeding, and speedy delivery. The comparative share which each of these remedies has had in relieving or curing these patients is not easily ascertained, for the greater number of cases where bleeding was employed, spontaneous delivery followed almost immediately, as if delivery was nature's mode of giving relief. In some of the cases attended by Dr. Bird, the delivery of the woman was followed by a cessation of the convulsions, though no blood was abstracted, but it was accomplished very shortly after the convulsions had commenced. These cases warrant the supposition that when the delivery can be effected with safety to the mother, soon after the appearance of convulsions, it may save the mother, but this requires to be confirmed by farther observation before we can be warranted in acting upon it.

The occurrence of this case shows the necessity of making it a rule to examine the urine of every pregnant woman the moment she manifests any cerebral or anomalous symptoms, and to repeat the examination daily as long as they remain. The liability of women in the condition of our patient to convulsions is well known, as is also, that the cause which produces such affection exists in the kidney, not in the brain. The disease of the kidney, however, is at first congestion simply—a state similar to that which is observed in persons who have bloody urine in scarlet fever, and therefore one we may pretty confidently expect to cure, provided we can discover it at its first appearance, and this we may do by testing the urine for albumen; for experience has taught us that the moment this form of disease attacks the kidney, it will indicate its presence by rendering the urine albuminous. Had this rule been acted upon in the present instance, albumen would have been detected in the urine of this woman and the state of her kidneys discovered before any other disease had supervened, and in all probability convulsion would have been prevented, and possibly the life of this woman might have been saved by bleeding and tartar-emetic.

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REPORT OF

A SINGULARLY COMPLICATED CASE.

CONVULSIONS. DELIVERY BY TURNING. JAUNDICE AFTER TAKING CHLORIDE OF LIME BY MISTAKE. GRAPE DIET. RECOVERY.

By Conway J. Edwards, M.R.C.S.E., Bath Easton, near Bath.

The subject was a married woman, between thirty-eight and thirty years of years. On the third of October last, I was requested to see her. She complained of a burning pain in the forehead slight intolerance of light, and some thirst. The pulse ranged between ninety-five and one-hundred, full, and metalic. Tongue dry and faintly brown She was between six and seven months advanced in pregnancy; and the movements of the fœtus were strong and lively. I prescribed a dose of calomel, jalap, and scammony, and a mixture of neutral salts, potassio tartrate of antimony and aromatic water. On the morning of the fifth the husband called to say that his wife was well, and further assistance unnecessary.

Early on the 7th I was requested to ride quickly to her, it being supposed she was dying. She was in a semi-comatose state; pulse 120, full, and bounding: the eyelids moving spasmodically, and the muscles of the mouth twitching rapidly. There were two other women in the room. To examine the condition of the retina, I had placed her head on my left arm, with the face towards the light, when a sudden flow of foaming saliva rushed from the mouth, and springing up in a tremendous convulsion, she fell back on the bed, and to all appearance seemed dead. The women screamed; so sending one for the husband, and the other for water, I opened both temporal arteries, of which the right bled in a good stream most freely. As the blood flowed, the carotid arteries began to heave, visibly. I again placed her on my arm, and as the husband arrived, a slow but very gentle inspiration was taken. He informed me, that in the middle of the night she complained of a violent burning pain on the crown of her head, and he fancied that she had had a slight convulsion; the pain abating in half an hour, he went to sleep, and awoke to find her looking very wild, and muttering in an incoherent way. She, however, had sense enough to point to her head, and to state that her pain was there. He also informed me that the urine had been scanty and high coloured, and the bowels not relieved since the 4th. I ordered the head to be shaved; a blister placed on it, and a second between the shoulders; mustard cataplasms to the stomach and thighs; hot bottles to the feet; five grains of calomel and a drop of croton oil every three hours, until the bowels were fully relieved.—Twelve A. M.: Consciousness returning. The bowels not responding to the first powder, a second was given.—Four P.M.: Medicine acting well; she recognised me; complained of weight and tightness over the whole head, and violent pain in the bowels, shooting to the back. This I attributed partly to the remedies—partly to incipient uterine action.—Ten P M.: improving; purgation ceased; the blister between the shoulders rising well. Ordered thin water gruel, and a mixture with neutral salts, and potassio tartrate of antimony.

October 9th.—Ten A.M.: Improving; but complained of a cutting pain over the forehead; renal secretion pale, and in large quantities; pulse soft, but nearly 100; skin and tongue moist. Ordered leeches to the forehead; a powder of calomel, jalap, and scammony; the mixture to be continued.—Nine P.M.: Pain in the head gone; felt better in every respect; uterine action (if there had been any) ceased.

From the 10th to the 12th she improved, and gradually took more solid food; but on the morning of the 14th she was reported by the nurse to be dying, and I was urged to ride over without delay, as she had given her something which she thought had killed her.

I found her lying on her back, the face bloodless, features collapsed, skin cold and damp, and pulse scarcely to be felt. The nurse had given her a large tablespoonful of Beaufoy's solution of the chloride of lime instead of castor oil. This happened about one A.M. At six A.M., the oil not having operated, the dose was on the point of being repeated, when the woman was found to be almost lifeless. I obtained a teacupful of brandy and sherry, and mixing them with hot water, poured it down the patient's throat, but not without some difficulty. I applied hot bottles to the feet, and friction to the surface, until the circulation was aroused. As the action of the heart increased, a dreamy consciousness came on, and in little more than an hour the respiration became deeper and more natural. The skin was suffused with a gentle perspiration, and sleep seemed to have set in. In this condition she remained until twelve o'clock. On awaking, she complained of burning pain in the epigastrium, and shooting thence to the lumbar region. Ordered hot milk and castor oil, with wine and milk at intervals. At eight P.M. uterine pains came on; and making an examination, I found the uterus dilated and membranes advancing. I ruptured them, and a hand and arm presented; but as the fœtus lay, as it were, doubled, I had no difficulty in finding a foot, by which I immediately turned the child, and extracted it without trouble. The placenta followed directly, and no flooding supervened. Causing her to be comfortably put to bed, I gave a quarter of a grain of acetate of morphia in camphor julep, and left.

15th.—She complained of violent pain in the region of the liver and right shoulder, sensations of sickness and fainting, and great distention of the abdomen. The bowels had acted freely, but the tympanitic distress was very great; the urine muddy and high coloured. Ordered a mustard poultice, small doses of blue pill and James's powder, and a gentle aperient with a carminative. In the evening, the tympanitic symptoms had passed off, and only a dull weight remained where the pain had been.

16th.—Thoroughly jaundiced. No yellow of a more intense kind could be prepared by a colour-maker than that which pervaded her skin. I prescribed a mixture of tartrate of potass, iodide of potass and manna, to be taken every four hours Diet, barley water.—Eight P.M.: The dull weight continuing, and being persuaded that the cause of these untoward and unexpected symptoms was spasm of the ductus communis produced by the chlorine evolved in the intestines, I ordered a grain of the acetate of morphia, with James's powder.

17th.—Passed an excellent night; does not complain of anything except thirst; tenderness gone from the region of the liver; alvine secretions clay-coloured; renal secretion turbid, and of a dark mahogany colour. She did not remember anything about the chloride of lime being given in mistake; nor recollect whether or not she had been conscious of its taste, or any burning feeling in the throat. I ordered a pound of grapes to be taken every day, and a diet of biscuits and weak barley water. Medicines: mixture of citrate of potass, and small doses of potassio-tartrate of antimony; a tablespoonful to be taken every three hours. A blue-pill at night, with morphia; and a gentle aperient of tartrate of potass, senna, and manna, every morning.

18th.—Alvine secretions dark; renal less turbid. Grapes *ad libitum*. Continue medicines.

19th.—Alvine secretions charged with bile; renal clear and dark.

20th.—Secretions natural; the skin losing its yellow tinge.

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21st.—Progressing rapidly to convalescence. Chicken-broth added to the diet.

23rd.—Yellowness has almost disappeared; leave off morphine and all medicines except the morning aperient. Continue the grapes; broth; and take a little sherry.

24th.—Yellow colour quite gone. This was my last visit. I gave a few general directions as to medicine, diet, and exercise, and left her convalescent.

The interesting points connected with the case are the following: the symptoms premonitory to the puerperal convulsion; the state of collapse which the dose of the solution of the chloride of lime had produced; the dose which had caused it; and the icterus caused by spasm of the ductus communis, which spasm was in all probability brought on by the irritating and poisonous nature of the liberated chlorine gas. And here I hope, without assuming anything to myself, I may point out that portion of the treatment bearing on the jaundice, in which grapes were freely given. I attribute the rapid loss of the yellow colour in some measure to it, and for the following reason: I had shortly before met, at an evening party, a German lady; and in the course of a conversation she informed me that she had suffered very severely from jaundice, and her German physician ordered her to eat eight and ten pounds of grapes a day. The attack was very severe, but she lost the yellow tint very rapidly, and her medical attendant assured her that it was in consequence of the regimen which he had recommended.

ON THE PHYSIOLOGY AND PATHOLOGY OF THE PHOSPHATE AND OXALATE OF LIME, AND THEIR RELATION TO THE FORMATION OF CELLS.

By William Beneke, M.D.,

Resident-physician at the German Hospital, Dalston.

Part I.

In a small work, which I have lately published in Germany, entitled "Der Phosphorsaure Kalk in physiologischer und therapeutischer Beziehung," Goettingen, 1850, I have established the following results:—

1st.—Just as in plants and inferior animals the phosphate of lime is indispensably necessary in man for the formation of cells; this formation does not only depend upon the presence of albumen and fat, but likewise upon the presence of phosphate of lime.

2ndly.—The want of phosphate of lime, either in plants or animals or men, causes a deficient formation of cells; and a great many pathological states of the system really seem to depend upon a deficiency of phosphate of lime.

3rdly.—In accordance with these general laws, we must suppose that we are enabled to cure, or at least to alleviate, by the internal administration of phosphate of lime, diseases marked by emaciation, formation of ulcers, in one word, by a deficient formation of cells.

4thly.—I have shown by my experiments, that such really is the effect of the administration of phosphate of lime,—that is to say, I have produced, by the internal administration of phosphate of lime, an undoubted increase of the cell-formation in diseases evidently showing a diminished formation of cells.

5thly.—As diseases or affections of this kind, which have come under my observation, I have to mention,—

a. Ulcerations of any part of the system, which are based upon general dyscrasia, such as scrofula, and which are not merely local affections.

b. Infantile atrophy, especially the well known atrophic state of children, suffering from rickets, and its accompanying symptoms, as diarrhœa, &c.

c. Tuberculous disease, more especially of the lungs, in its earliest stages.

6thly. There seems to be a remarkable connexion between scrofula and deficiency of phosphate of lime. But as it generally ought to be mentioned, that we never shall be able to produce an increase of the formation of cells, unless we administer a wholesome, preferably nitrogenous diet; so it must be considered that the deficiency of phosphate of lime is only a constituent part of these diseases; and by its mere use we are very well enabled to remove symptoms, which depend on its deficiency, but by no means shall we cure thereby the dyscrasia *in toto*.

These are the results to which I have drawn the attention of the profession in the paper above alluded to; and as I cannot expect it to be known in this country, before proceeding further I shall give a short extract of the chief points of the facts on which I have founded my conclusions.

It is only a few years since we became acquainted with the great importance of inorganic substances in the formation of organic compounds. Liebig first established the fact, that in plants the formation of vegetable acids, of seeds, &c., does not only depend upon the presence of carbonic acid and water, or carbonic acid, nitrogen, and water, but likewise on the presence of the inorganic constituent parts of the soil. This really being a fact, based upon observation and experiment, we must be induced to suppose that a similar relation between organic and inorganic parts exists in animals, and even in men. These inorganic parts of the economy, both of men and the inferior animals, are by no means merely incidental substances,—they are by no means unimportant; on the contrary, the time has come when we are far from admitting the least doubt of their necessity for the chemical processes which take place in these organizations; in one word, the inorganic parts are quite as essential as the organic compounds. This undoubted fact having been hitherto overlooked, we may judge of the correctness of the views applied to organic chemistry until within a few years, and especially of the analyses of blood, which have been performed principally in France and Germany; in nearly all of them are exclusively considered the organic compounds, the inorganic parts being set aside.

It is not here the place to enter more deeply into these views. I have only to show how far we are acquainted with the relation of phosphate of lime to organic compounds, and even to the formation of cells.

In first considering plants, we have been informed by Liebig that the salts of phosphoric acid are indispensably necessary for the formation of nitrogenous compounds as well as of cells. In his elaborate work, "Organic Chemistry in its Application to Agriculture and Physiology," the author affords a great many proofs of this result, out of which I beg to select a few. "None of our plants," as we read at page 100, fifth German edition, "can bear perfect seeds—that is, seeds yielding farina, without a large supply of phosphates and even ammonia, substances which they require for their maturity. In the stems and leaves of plants we find salts with alkaline bases; the azotic compounds we find always accompanied by salts of phosphoric acid, and we therefore must suppose that they are of the greatest importance in the economy of plants. The alkaline bases are principally wanted for producing sugar, gum, pectine, and amylum—substances which do not contain nitrogen; on the other hand, the salts of phosphoric acid are principally necessary for the formation of azotic compounds." (p. 251.) These interesting remarks are based upon facts which do not

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admit of any doubt; they apparently prove the remarkable relation between the salts of phosphoric acid and azotic compounds in plants. But there is another point we have to direct our attention to, and this is the most important with respect to my present purpose. At page 138 Professor Liebig says: "We know that the quantity of starch in potatoes increases when the soil contains much humus, but decreases when the soil is manured with strong animal manure, *although in this case the number of cells increases*, the potatoes acquiring in the first place a mealy, in the second, a soapy consistence. Beet-roots taken from a barren, sandy soil, contains a maximum of sugar, and no ammoniacal salts, and the Teltowa turnip loses its mealy state in a manured land, because all the circumstances necessary for the formation of cells are there united." Well then, we must trace the causes of the peculiar influence of the manure on the formation of cells, and in referring to its constituent parts, and the experiments which have been made on their relative power, we shall be far from admitting the least doubt that the salts of phosphoric acid are those materials, upon the presence of which the formation of cells depends. This view is still farther proved to be correct by our finding that for manure of animal excretions, other substances containing their essential constituents, may be substituted. "In Flanders (Liebig, 'On Agricultural Chemistry,' English translation by Playfair, 1840, page 182) the yearly loss of the necessary matters in the soil is completely restored by covering the fields with ashes of wood or bones, which may or may not have been lixiviated, and of which the greatest part consist of phosphate of lime and magnesia. The great importance of manuring with ashes has long been recognised by agriculturists as the result of experience. Its use will be at once perceived when it is considered that the ashes, after having been washed with water, contain silicate of potash in the same proportion as in straw, and that their only other constituents are salts of phosphoric acid." Finally, Liebig adds the important remark, (German edition, page 245.) that we may furnish a plant with carbonic acid and all the materials that it requires; that we may supply it with humus and ammonia in the most abundant quantity, but that it will not produce albumen, fibrine, and caseine, unless the salts of sulphuric and phosphoric acid are afforded to it. "We ought to suppose that without their cooperation, the ammonia does not influence in the least the formation of the nitrogenous substances."

This, then, is the result of the foregoing remarks: that the azotic compounds in plants are not produced without the co-operation of the phosphates; that the produce of cells increases proportionally to the power and quantity of the manure afforded to the soil, and that this power particularly depends upon the presence of phosphates, the other salts really being of no great importance in this respect.

But there are different sorts of phosphates contained in the soil, such as phosphate of soda, phosphate of lime, phosphate of magnesia, and phosphate of iron. Is there any reason to believe one of these several substances to be more important for the produce of nitrogenous substances and cells than the others? Facts are not wanting which afford an affirmative answer to this question. The single experience that we may considerably increase the produce of nitrogenous substances and cells by manuring the land with ashes of bones, is quite sufficient to prove that the phosphate of lime is of the greatest importance in this respect. A great many analyses of ashes of bones, communicated in the "Annalen für Pharmacie und Chemie von Liebig und Wöhler," by Enderlin, Fresenius, and Will, and the analyses of bones by Berzelius, evidently show that the phosphate of lime is always present in ashes in a certain proportion, according to the nutritive power of the plants and the soil from which they are taken; and that, on the other hand, the proportion of phosphate of magnesia and soda in bones themselves is too small to partake of the influence exerted upon the soil by manuring it with bones. Berzelius found in 1000 parts of dry bones, 53·04 phosphate of lime 1·16 phosphate (carbonate?) of magnesia, and 1·20 soda, with a small quantity of chloride of sodium.

On these facts, then, I have founded the conclusion, that the phosphate of lime is indispensably necessary for the formation of cells in plants.

With regard to the inferior animals, and the part which is performed in their economy by the phosphate of lime, I have only to mention an excellent paper by Dr. Carl Schmidt, "Zur vergleichenden Physiologie der wirbellosen Thiere. Braunschweig, 1845." In this paper Dr. Schmidt communicates most interesting experiments, from which it becomes evident, that in inferior animals the phosphate of lime has an intimate relation to the formation of cells. Dr. Schmidt ascertained beyond a doubt, that in the articulata the quantity of phosphate of lime increases or decreases proportionally to the quantity of chitin, a sort of colourless transparent tissue, which is not soluble in water, alcohol, ether, and liquor potassæ, and forms the principal constituent part of the skeleton of all the invertebrata. Now, this tissue is the result of an active formation of cells during the period of changing the integuments in these animals, and so it results that the quantity of cells formed is proportionate to the quantity of phosphate of lime present. This result becomes still more evident from the experiment which Dr. Schmidt describes in the following words:—"By carefully and gradually scraping off the outside of the hard scales of the thorax and of the claws of crabs to the upper pigment-layer of the subjacent membrane, I produced an exudation of new matter. This quickly took place, and, after the lapse of eight hours, a thickish, viscid, transparent mass (cyto-blastema) was to be found. This mass contained a large quantity of corpuscles, which did not dissolve in water, nor in acetic acid (fat), and others, which were soluble in water and acetic acid (albumen). No other corpuscles were present. When this mass was incinerated, a remarkable quantity of phosphate of lime (about eight per cent.) resulted, besides a small quantity of alkaline phosphates and carbonate of lime, the latter being the result of the incineration. The phosphate of lime was held in solution in the mass itself, as was proved by the turbidity resulting from the addition of a drop of ammonia to a drop of the liquid placed under the microscope. After the lapse of fourteen to sixteen hours the soluble molecules (albumen, and very likely phosphate of lime) surrounded the fat-globules, exhibiting in this way globular masses. Some of these masses were covered already by a membrane, so as to form cells, others not. At the same time numerous rhombœdic crystals (carbonate of lime) appeared. By the addition of liquor potassæ a swelling of the cells and their molecular contents took place; afterwards they became transparent and dissolved; the fat globules were recognized as forming the nuclei of these cells. The cells did not yet present themselves as chitin. But after twenty-four to thirty-six hours several of these cells were extended, spindle-like; they swelled still by the addition of liquor potassæ, but they did not dissolve more in this stage, and appeared to be of the chitinous composition." These experiments are followed by others, which afford a negative proof in favour of Dr. Schmidt's views alluded to. In examining, namely, the calcareous scales of helix, and their interior, transparent, *structureless* membranes, he observed that no phosphate of lime was present, and accordingly no cells were found;

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nothing could be detected but amorphous, hardened, mucous masses, separated by layers of carbonate of lime. Dr. Schmidt himself says: These observations really are so striking as fully to confirm the opinion before advanced; and he further adds as his firm belief, that a certain combination of albumen and phosphate of lime, or better, that a solution of albumen, which is saturated with the phosphate of lime, is particularly enabled to coagulate by the contact of heterogenous substances, and to form membranes around them—that is to say, walls of primary cells.

Well, then, having become acquainted with these remarkable facts, I put forward the question, whether the phosphate of lime might not have the same relation to the formation of cells in the higher classes of animals, and even in men, as it has been shown to have in inferior animals and plants? I have been fortunate enough to obtain satisfactory and affirmative results.

The way in which I tried to solve the question was a double one—first, I had to prove that wherever we find a formation of cells, the phosphate of lime is present, and *vice versâ*, that the phosphate of lime is wanting where no formation of cells takes place; secondly, I had to show that the phosphate of lime is indispensably necessary for, and that it really influences, the formation of cells.

With respect to the first point, I examined a great many pathological exudations, such as the serum produced by blisters, the exudations and secretions of wounds and ulcers, &c., &c.; and I have shortly to state that wherever a formation of cells took place, the phosphate of lime was found in considerable quantity, and wherever it was absent, I could scarcely find traces of phosphates. In order to detect the smallest quantities of phosphate of lime, I used the micro-cope, which shows the most beautiful crystals of sulphate of lime, if a preparation, containing the phosphate, is mixed with a small drop of sulphuric acid, and no crystals at all where no lime is present. However, it is requisite for a microscopical examination of this kind to be well acquainted with all stages of the formation of the sulphate-of-lime crystals, so as to be enabled thereby to judge whether the quantity of phosphate present is a large or a small one; the former being the case, we shall observe a rapid and splendid formation of large crystals; the latter taking place, only the former stages of the crystal formation are to be detected.

First, I examined the serum which was drawn by blisters. It is rather difficult to detect the phosphate in a single drop of the unaltered serum in the way described, the quantity of lime really being a very small one. However in a single drop I detected crystals of the smallest size, by the addition of sulphuric acid, and by continued examinations, I found that the crystals presented themselves the more quickly and well marked the sooner the efflorescion of pus-globules took place in the serum, which was left beneath the skin. But from twelve to twenty-four hours are often required for the formation of crystals, and the preparation should not be judged of until during the lapse of this time repeated observations have been made. If, on the other hand, I slightly evaporated the serum in a hot-water bath, and now mixed a drop of the evaporated serum with sulphuric acid, a rapid formation of crystals generally took place, which undoubtedly showed the phosphate of lime to be present in large quantity. I then examined exudation-matter of wounds and ulcers, and these observations really afforded the greatest interest; they decidedly proved the relation of the phosphate of lime to the formation of cells. It will be well known to every accurate observer, that during the time of cicatrization of wounds and ulcers, two different sorts of exudation generally take place. First, an exudation appears, which I should like to call "spurious exudation," and which really exhibits nothing but a natural cover for the part affected or wounded, being far different from what we call "spurious granulations;" this exudation is subsequently thrown off; afterwards beneath this covering the real blastema is produced, affording the materials for the tissue which is to be formed, and undergoing the well-known changes to cells, tissue, &c. Well, then, if we examine microscopically what I have called the spurious exudation, we shall observe it to consist of amorphous structureless masses; no cells are to be detected; it only seems to consist of molecules; no organization takes place. And even in these masses, by the addition of sulphuric acid, I have never observed the formation of sulphate-of-lime crystals, and consequently no phosphate of lime could be present. If, on the contrary, I examined in the same way the blastema produced beneath the spurious exudation, after the lapse of about twenty-four hours, I not only met with beautiful exudation-cells and pus-globules, but also, by adding a drop of sulphuric acid, could observe a rapid formation of crystals, so as to be led to the conclusion that the phosphate of lime is present in a large quantity, where cells are produced, and that it is wanting where we find nothing but amorphous masses. Lastly, with respect to this point, I have to draw the attention to the muscular tissue itself; and it will become evident, from my observations, how small a quantity of phosphate of lime we are able to detect by the kind of examination alluded to. The muscular tissue is well known to contain a certain quantity of phosphate of lime; it was the result of Liebig's inquiries, that when the formation of muscular tissue from the constituents of the blood takes place, nearly the whole quantity of alkaline phosphates returns into the blood, and that at the same time a certain quantity of phosphate of lime becomes chemically fixed in the organs themselves. This quantity, then, however small it may be in a muscular fibre, which is so fine, as, by microscopical examination, to show the transverse stripes, I have detected, in the above-described way, in a few muscular fibres which I had submitted to the action of sulphuric acid for about twenty-four hours. I observed, after this time, by the microscope, crystals of sulphate of lime—of course only in very small quantity, but beautifully formed. Especially in this kind of preparation the different stages of crystal-formation are to be well observed.

After these experiences, the other question remained whether the phosphate of lime really influences and increases the produce of cells? I have tried to solve this question in a double way, first by experiments, and, on the other hand, by practical inquiry.

With respect to the experiments, it is my firm belief that I succeeded in artificially producing cells, which did not show any distinction from pus globules and what we call exudation-cells. For this purpose I mixed together a part of the albumen of a hen-egg, some pure fat, a small quantity of phosphate of lime, and a very few drops of water; put the mixture, which was contained in an evaporating-dish, into a hot sand-bath, at a temperature of 104° F., and then microscopically examined the changes which took place in the mixture itself. After the lapse of from four to six hours, I observed that an accumulation of albumen and phosphate had already taken place around the fat-globules; and after another period equally long, I found those forms of cells which I have figured in the first plate of paper alluded to. In another preparation I distinctly observed the gradual process of the formation itself by the simultaneous appearance of all the stages of formation of cells. Considering as the first stage the pure fat-globules, I observed, as the second, fat-globules,

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which presented a turbid appearance, in consequence of an accumulation of albumen and of pho-phate of lime on their outside; and this accumulation increasing more and more, produced cells, which did not differ in their appearance from real exudation-cells. By the addition of sulphuric acid to these cells, I obtained the same results as by treating exudation-cells or pus globules with it: there appeared on the outside of the cells very small and dark forms of crystals, which I considered to be crystals of sulphate of lime. I further observed some larger cells, which included a smaller one, so as to exhibit the appearance of what is called the "ovum primitivum," the observations and communications of which are communicated by Rud. Wagner in his splendid work, "Prodromus Historiæ Generationis." It appeared to me, that in these cases an accumulation of fat took place on a ready-formed cell, and that this fat-accumulation became surrounded again by the combined albumen and phosphate of lime. By the addition of acetic acid the cells became clearer, and dark molecules appeared on their surface.

Now with respect to the natural combination of the albumen of a hen-egg with a small quantity of phosphate of lime, I inquired whether the formation of cells should not take place by the mere addition of fat to it, and its continued exposure to a temperature of 104° F. I have instituted experiments with respect to this point: and I have found, that after the lapse of about eight hours some forms of cells could be detected, but their quantity was much smaller than in the above-described experiments—a result which was to have been expected, if the theoretical views upon which I founded my observations were correct. In conclusion, I have to state, that I obtained the same results by repeatedly performing the same experiments, and I only hope that they may soon be repeated by physiologists who are known to be authorities in this kind of observation.

With regard to the above-mentioned practical inquiries I equally obtained satisfactory results, which evidently showed that the pho-phate of lime increases the formation of cells, supposing a sufficient quantity of albumen and fat to be present. I must refer to my former publications with respect to the individual cases; here I only beg to mention the general results.

First I tried the phosphate of lime in patients who suffered from chronic ulcers, resulting from the scrofulous diathesis, and exhibiting a want of formation of cells in the highest degree. These patients had been for a long time under medical treatment, inclusive of my own, but all remedies had been fruitless, such as cod-liver oil, ointments of lead and zinc, lotions of nitrate of silver, &c. Being myself quite sure, that no influence of the former kind of treatment could be still remaining in operation, and even after having left off all treatment for a long time, I then ordered the pho-phate of lime to about four or eight, to twenty grains per diem, and after a few days the ulcers evidently showed themselves in another state. The suppuration improved; instead of an ichorous secretion, a pus bonum et laudabile was produced, and after a few days longer the cicatrization begun. In children, in particular, I obtained very striking results, and there was not the least doubt, that the effect must be ascribed to the phosphate of lime. Generally I ordered it to be taken with the breakfast, dinner, and supper, in order to have it mixed as well as possible with the food taken; it is certain, that the phosphate of lime easily dissolves in albuminous solutions as well as in mineral acids, and in the acid of the stomach. But I have especially to mention, that in several cases, some time after having left off the use of the phosphate of lime, I observed a fresh outbreak of the ulcers, for the real cause of which circumstance I could scarcely account at the time; I only supposed that the bad living of the patients, the food exclusively consisting of potatoes and bread, the abode in a damp unhealthy air, &c., caused the continuance of the general dyscrasia, and the repeated breaking out of the local affection. I am able now to accounr for it better than I could before, and with respect to this point, I must refer to the following parts of these communications.

As most of these ulcers occurred in patients afflicted with scrofula, the question arose, whether the phosphate of lime really cured the scrofulous dyscrasia, or only a part of it. With regard to this point from many observations, the number of which has much increased since, it resulted that there exists an undoubted intimate relation between scrofula and want of pho-phate of lime, but that we are not able to cure the dyscrasia by the mere use of the phosphate. The same is the case with tuberculosis, a disease which is well known to be intimately related to, if not identical with, scrofula. In both kinds of disease, however, we shall promote the cure in the most efficient manner by the administration of the phosphate of lime, and I cannot forbear recommending its use as much as possible. In the following pages I shall give the explanation of these facts, which I hope will at once prove, that the effect of the phosphate ought to be such an one as I imagined and really found it to be. I have especially to mention, that the waste of tissues, or, in other words, the want of formation of cells, was apparently less in many cases of tuberculosis and scrofula, which were treated with phosphate of lime, besides other remedies, than in those which were treated without the phosphate; that the cure of tuberculous ulcers of the intestines was evidently promoted and even effected by the administration of the phosphate, and this remedy proved most efficient in cases of incipient acute tuberculosis, and even those which are well known to manifest at their commencement nearly all the symptoms of typhus. I need not enter here more deeply upon the special effects of the administration of the phosphate in these cases, if the one general fact is always kept in mind, that it increases the formation of cells, or prevents the rapid and fearful waste of tissues.

In accordance with those facts, the phosphate of lime proved most beneficial in children who suffered from scrofula, diarrhœa, ulcerations and excoriations of the skin and the bowels, general waste of the cellular tissue, loss of power, &c. In these cases, the mere use of six to ten grains per diem was often quite sufficient to effect the cure, and I have met with such striking and satisfactory results, as to leave no doubt that the want of the phosphate of lime was the real cause of the symptoms alluded to. These results, too, are confirmed by many physiological observations. Chossat, for instance, observed that pigeons, in consequence of an artificial want of phosphate of lime in their food, became afflicted with diarrhœa and softening of the bones; children, in the period of dentition, or when afflicted with rickets, which disease positively shows a want of phosphate of lime, are especially well known to suffer from diarrhœa, sores, &c. Still I have to mention the interesting observation, that in patients who were afflicted with diseases, in which the phosphate of lime proved beneficial, and who consequently were supposed to suffer from a want of pho-phate of lime in their economy, wounds of occasionally applied blisters healed much more slowly than was the case in other patients, and the more so the more distinctly those symptoms appeared which should be referred to a want of phosphate of lime.

In syphilis I also tried the phosphate of lime, and even in persons who had for a long time already suffered from secondary ulcers, ulcers of the bones, &c.,

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and became emaciated and extremely weak during that time. These cases likewise showed a most beneficial effect of the phosphate on the formation of cells. It ought to be mentioned, that besides the phosphates, the iodide of mercury was administered, but I never have met with such a rapid cicatrization of syphilitic ulcers, as was the case in these persons, and I could not help thinking that the cure was promoted in a remarkable degree by the internal exhibition of the phosphate. With respect to this point, I have drawn attention to the relation between scrofula and syphilis, and I think there are many symptoms in both of these diseases, and many facts besides, which evidently show an intimate relation-ship between them, and require a more accurate study than has been given to them hitherto.

As to other affections, in which I have tried the phosphate of lime, I have to mention rickets, caries, inflammations, and consecutive abundant suppurations of the cellular tissue, and also fracture of the bones. In all these cases the administration proved most beneficial, and I would strongly advocate its further experimental use. With respect to fractures of the bones, I have to state in particular, that the consolidation of the callus took place in a much shorter period than is generally the case; however, too large doses of phosphate of lime must be shunned in these cases, as I have observed an abundant callus, causing a deformity of the bones, produced by the daily administration of twenty-four grains of the phosphate for a fortnight.

With regard to the fact that phosphoric acid is always produced in the economy by the changes of albuminous substances, and supposing that this phosphoric acid might combine with the lime, if carbonate of lime has been given, I tried also the carbonate; but the results of its administration were not so favourable as those which followed the administration of the phosphate, unless in some cases where the urine presented a high degree of acidity. This even was the case in many children afflicted with scrofula, and it must be decided by future experiments, whether the carbonate of lime is preferable to the phosphate in these patients.

ON AN

EXTRAORDINARY CASE OF OVARIAN ASCITES, TERMINATING FATALLY;

WITH THE APPEARANCES ON DISSECTION.

By Shirley Palmer, M.D., Tamworth.

A few weeks ago I was requested to visit a female, of small stature, aged sixty-two years, who had long been suffering from ascites, and whose abdomen had, at the period of my visit, attained an extraordinary volume. My patient was married, but had never been pregnant. She had, until the commencement of the dropsical affection, enjoyed good health, could assign no cause for it, and complained of few symptoms which might not be satisfactorily traced to the mechanical pressure of the effused fluid upon the abdominal and thoracic organs. The bowels were torpid; the secretion of urine was very scanty; appetite impaired, and thirst moderate. There was no irregularity in the heart's action. The embarrassment of respiration obviously resulted from the diminished capacity of the thoracic cavity. Each of the lower limbs, considerably swollen, exhibited a large patch of superficial ulceration from which an irritating and offensive ichor constantly exuded. From the enormous distention of the abdominal parietes, it was impossible to form a correct diagnosis of the original seat of the disease; and the imperfect history elicited from my patient served not to throw the faintest light on this important question.

It required, however, little experience or hesitation to decide that, in a case like this, nothing could be effected by internal remedies. The physical energies were rapidly sinking, and it was very evident, that unless means were promptly taken to relieve the internal organs from the increasing pressure, the patient could not long sustain the unequal conflict. Tapping presented itself as the only resource, and as the patient was not in a situation to incur the expense of repeated visits at her own residence, it was proposed that she should be removed to Tamworth, and undergo the operation there, under my own management and inspection.

On Tuesday, Dec. 31, my patient arrived at Tamworth, excessively fatigued and exhausted by a journey of fourteen miles over the rugged cross-roads of a hilly country. I visited her that evening, found her in a state of great prostration, and decided on deferring the operation until the system had somewhat rallied from the exhausting consequences of the journey.

Day after day, however, my patient grew worse rather than better. Acute and continued pains in the pubic region were added to her other sufferings. Extreme difficulty was now experienced in getting the bowels to act; the secretion of urine did not amount to six ounces in the twenty-four hours. Loathing of food, with nausea, and occasional vomiting of morbid bile, intense thirst, constant restlessness, and increased debility, were experienced. The treatment consisted principally of mild aperients, stimulating injections, the effervescing draught, with an excess of ammonia, fomentation of the bowels, followed at first by frictions with iodine ointment, and subsequently by an opiate embrocation; and the strength was sustained by the frequent exhibition of animal broths and animal and vegetable jellies.

On the morning of Thursday, Jan. 9, the attendants were greatly cheered by an evident mitigation of all the worst symptoms, and a rallying of the patient's system from the suffering and depression of the past week.

Saturday morning was now fixed for the performance of the operation, and all the necessary preparations made; but on Friday morning, shortly after midnight, the pain, vomiting, and restlessness recurred in an aggravated form. Food and medicine of every description, and in the minutest quantities, were obstinately rejected: and on Saturday morning, about two o'clock, the distressing conflict terminated in death.

In a few hours after dissolution, my son, Mr. C. Ferrers Palmer, drew from the patient's abdomen *more than twelve gallons* of pale, limpid, straw coloured serum. It was cautiously measured, in a graduated vessel, with my own hand, and amounted, as nearly as possible, to *fifteen hundred and fifty-eight ounces*, or somewhat more than *ninety-seven pints*. As the specific gravity of the fluid, calculated by an accurate urinometer, was 1010, the whole weight must have obviously exceeded *ninety-eight pounds*.

This collection of fluid was contained in an enormous cyst, formed by the right ovary. The parietes of this great sac were about the eighth of an inch in thickness, exceedingly tough, spread over with a network of loaded bloodvessels, and with a multitude of attached, hydatid-like cysts, containing a transparent yellow fluid and varying in size from the volume of a small apple to that of a garden-pea. Two of the larger cysts were removed for more minute examination; but the majority burst in the effort to detach them. The liver and stomach, perfectly free from any morbid alteration, and the spleen, greatly reduced in volume, were pushed upwards towards the summit of the thoracic cavity. All the other abdominal organs were quite sound.

The patient's body, after the removal of the effused fluid, was calculated, by the husband, to weigh less than seven stone; and consequently not to equal in

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weight the enormous load of serum which it had previously contained.

ON THE EMPLOYMENT OF THE TINCTURE OF CANTHARIDES IN OBSTINATE ULCERS.

By John Tait, Esq., H.E.I.C.S., Madras Retired List, Dunse, Berwickshire.

I am well aware that the application of tincture of cantharides in ulcers has long been recommended by different writers on surgery, but as the practice is not, I believe, a very general one amongst medical men, it has occurred to me that the attention of the profession might be appropriately directed to it, as it has proved very successful in my practice; and I believe it to be a remedy that deserves attention.

About five weeks since, a poor man from a neighbouring county placed himself under my charge respecting a severe ulceration of the right leg, from which he had suffered for eight months, during which period he had been treated unsuccessfully by five different medical men. On examination, I found the leg from the knee to the ankle to be nearly one continued mass of ill-conditioned ulceration, the small portions of skin still retaining integrity, being much congested, and of a livid purple colour. A profuse watery and offensive discharge, tinged with blood, issued from the affected parts; the edges of the sores were indurated and irregular, the ground of the various ulcers being deep and "scooped" out and formed apparently of condensed cellular membrane. They had an angry and irritable aspect, and were attended with very great pain. The whole limb was much swollen. The patient had suffered from syphilis and syphilitic iritis, and as he still experienced nocturnal pains in the sound limb, I considered his constitution to be tainted by secondary symptoms. He complained of great weakness, and exhausting, diarrhœa, and other symptoms of hectic. The following was prescribed:—Mercury, with chalk, five grains; sulphate of quinine, one grain; powdered opium, half a grain; mix for a powder, to be taken thrice a day. The sores to be fomented three times a day with a strong decoction of poppy-heads; a poultice to be applied in the intervals; absolute rest, and elevated position of limb enjoined. The powders were continued until the gums were affected, after which the diarrhœa ceased. The limb was now less swollen and painful; warm-water dressings were substituted for the former local treatment employed, and the sores were bathed with a solution of the chloride of lime. The following was taken internally:—Iodide of potassium, one drachm; compound tincture of cinchona bark, two ounces; water, fourteen ounces: mix. One ounce of the mixture to be taken morning, noon, and evening. As soon as the pain subsided, an ointment composed of balsam of Peru was exchanged for the water-dressing, the other remedies still being employed.

The tumefaction of the limb was now much reduced, and the sores had lost all traces of irritability, but remained stationary, and evinced no disposition to heal, the wounds being relaxed and gaping, with no perceptible appearances of granulations. He was now ordered to take ten drops of the tincture of cantharides with each dose of the potass iodide of potassium, the same topical applications being persisted in. Three days afterwards, the ulcers began to contract, healthy, firm lymph was effused round the edges, and red granulations appeared in the wounds. The iodide of potassium, with the chloride of lime wash, was now omitted, and he was directed to use the following:—Tincture of cantharides, twelve drops three times daily, with the following draught:—Diluted nitric acid, twenty drops; compound tincture of cinchona, two drachms; water, one ounce. Red lotion. Continue the use of the balsam of Peru ointment.

Union continued rapidly to progress, and the ulcers were healed in a fortnight from the date of the commencement of the tincture of cantharides.

Remarks.—Such was the progress and issue of a case that had baffled every previous treatment employed. It affords one of many examples I could bring forward of the great utility of cantharides in indolent ulceration, dependent either upon atony of the engaged parts, or system generally.

In 1845, while resident in Burmah, my attention was directed to the treatment of the ulcers met with in that country, and which had long been found difficult to heal by different medical gentlemen stationed upon that coast. I drew up a paper, exhibiting the appearances presented by the different ulcers, and the states of constitutional derangement with which they were identified, and in which I had employed the tincture of cantharides with marked success. The paper alluded to, backed by several cases treated by different medical friends, was forwarded to the Madras Medical Board, who ordered it to be circulated throughout the medical service of the Madras army.

A few extracts from the paper here referred to will show the character of the ulcers where I found the tincture of cantharides useful:—

Extracts.—1st. "Where the granulations were exuberant, but pale, weak, and flabby.

2nd. "Where there was deficiency, or total absence of granulations, the ulcers being deep and scooped out, with raised and indurated edges.

3rd. "Where the granulations were not defective, but cicatrizing irregularly, sometimes in the centre, at other times on one side, the lymph which was thrown out and organized one day being absorbed the next.

"It was further remarked that their indolent character was to be referred to morbid states of the system, varying from little perceptible deviation from health to the different grades of anæmia. It was difficult, at first, to assign the cause of this indisposition to heal, in sores which presented themselves in subjects where the general health was little impaired, and this was increased on finding that they did not yield to the exhibition of remedies known to exercise a beneficial influence upon such ulcers. It was from observing the ineffective attempts at reparation which I occasionally witnessed in the different cases that came before me, that suggested the belief of the primary derangement to be owing to deranged circulation of the affected part, and the blood being deficient of, or not elaborating, plastic lymph of sufficient quantity or quality necessary for the healthy granulating process."

My reasons for coming to these conclusions may be briefly stated. The local derangement of the circulation was inferred to exist, from the pale colour of the ulcers, the paucity of granulations, and the hard, indurated bases. The deficiency of lymph was seen by watching the character of that thrown out; it appeared as a thin, scanty epithelium, of a bluish, almost transparent colour; was long in acquiring the features of the contiguous skin, and was altogether divested of the whitish, thick, or flesh-coloured appearance which healthy and well secreted lymph usually presents.

ON THE LATELY PREVAILING FURUNCULOID EPIDEMIC.

By J. Cooper Forster, M.B. Lond., F.R.C.S.,

Surgeon to the Surrey Dispensary, etc.

The medical reader will quickly understand the subject here intended to be dwelt upon, and the general

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reader, of which there are many who peruse THE LANCET with interest, need not be alarmed. I am not about to treat of the devastating cholera, or the direful and distressing influenza, but of what I consider to be a sequel to those disorders. Neither am I going to give a lengthened tirade upon a new form of disease, but am content to call the notice of the profession to a common and every-day complaint, more especially rife at this present time, and which has been so now for the last two months, known as the common furunculus, or true boil, with its varieties.

That this disease has been particularly prevalent lately, no one, I think, who is in the habit of seeing much practice, will deny. Whether we look amongst the better class of society, the middling, or the poor, still there it is in different varieties and assuming various shapes and forms, according to the *vis vitæ* and other peculiarities of the subject it attacks.

First, let us notice the better class of patients; and here we see at this present time those who have been subject to acne, and have been cured, again suffering from that complaint. The base of the pustule here and there is becoming hardened, and the whole disease has become so aggravated that almost all the more severe spots appear like little boils, particularly about the neck; these are in some cases excessively painful, producing constitutional disturbance and great uneasiness.

Amongst the next class of patients we see small boils, in their true state, forming in all parts of the body; in some few cases becoming carbuncular without any assignable cause, the face, neck, arms, hands, buttocks, and thighs, alternately being attacked, and occurring in persons in other respects perfectly well, giving rise, in some cases, to severe disturbance of the general system, and at all events to great inconvenience. This class has not been limited to any particular temperament: the moderate liver—the man who prides himself on never having had a day's illness, and who keeps his health and bowels most carefully under his surveillance—the man of full plethoric habit,—and the *bon vivant*—all have suffered, and more especially our own profession. The gentler sex also have not been exempted, and in their case these troublesome companions have taken a partiality for forming on the well-rounded glutæi.

Lastly, amongst the poor the number of cases one sees are lamentable, and in most instances the boil becomes a true carbuncle, forming an extensive and fearful slough, but whether this arises from neglect or any peculiarity of constitution it is difficult to determine, although I am much disposed to think that the former is the true cause.

As a rule, and indeed amongst the greater number of cases that I have been called upon to see, the general health has not very materially suffered, though in those cases where there has been great constitutional disturbance, this has been disproportionate to the amount of local mischief. It becomes interesting, after having established the fact of the prevalence of the furunculoid diathesis, at the present time, to seek for a satisfactory cause for its appearance in so extensive a form.

What, it may be inquired, is the cause? Is it to be attributed to the old and hackneyed notion of gastric derangement? or to the increase of certain kinds of provisions from abroad, such as fruits, vegetables, &c.? for as it is now well known, scarcely any of the fruit in the London markets is home grown; or is there anything peculiarly deleterious to English stomachs in the foreign wheat which has been so largely imported into this country? or is it owing to some of the many adulterations which are found so extensively mixed with our daily food, such as coffee and sugar? which have in your valuable journal already been noticed, although I think that beer, tea, and bread, will afford still more important disclosures. Or, can this malady, on the contrary, be owing to the great increase in the consumption of meat, and that nature is by these means eliminating from the system what to many is a poison viz, matter rich in nitrogen? In many cases there can very fairly be found an exciting cause in a peculiar susceptibility of the skin and sub-areolar tissue which disposes these parts to take on this form of action, as I have lately seen it occur very frequently after the application of a blister. From whatever cause it may arise, the inquiry is one that is full of interest to all, for it attacks, as I think I have pretty good evidence to prove, in a modified manner, all ranks and classes of society.

I cannot say I am willing to adopt any of the above theories, as I believe the disease to be owing to a peculiar form of miasmatic poison which is at the present time pervading the atmosphere of London in the same way that cholera and influenza have so lately done. And I consider, also, that this form of complaint follows shortly after, as surely as influenza precedes cholera; and I cannot but think that many of your readers, upon due investigation, will believe with me, that the malarious origin of this furunculoid disease is the only tenable doctrine.

It would be useless, and indeed tedious, to occupy your valuable space by relating cases of this troublesome complaint; scarcely a day elapses that one form or another of it is not presented to my notice amongst some class of society, and doubtless many of your readers have experienced as great a prevalence of the disorder, as would induce them to give it the title I have affixed to it—viz., the prevailing epidemic. It may doubtless be supposed by many as too trifling to investigate I would ask such, Is there any disease, in which, the general health being good, greater pain is experienced? or, Is there any complaint, which, if it does not happen to disturb the general health, wages greater war against the amiability of individuals? Those who have suffered will readily answer in the negative.

The treatment is, in many cases by no means satisfactory: it is so well understood, theoretically, and supposed to be known practically, that to make any detailed remarks upon it would be considered extreme presumption on my part. Acids by some, alkalies by others, with tonics and poultices *ad libitum*, are generally considered the sum total of treatment. Still, in spite of this, the boils continue to appear, first in one place and then in another, and this, indeed, will be the case unless a very free opening be made, and in many cases, a crucial incision. This is the plan I always adopt, combined with constitutional treatment, and I have not found that my patients have been troubled with their companions long afterwards, severe as such treatment may appear for a trifling disorder.

ON A

CASE OF CHRONIC HYDROCEPHALUS.

By H. ROWLAND HOSKINS, Esq., M.R.C.S., Hoxton.

A CHILD, two years of age, was brought, to me on the 14th of October, 1850, suffering from chronic hydrocephalus. The history was as follows: For the first three months after birth she had frequent convulsive fits, but after that period they became less frequent; she appeared to thrive, learned to speak a few words, and to walk, and appeared to be in good health. When eighteen months old she had a fall and struck the back of her head. From that time she lost the power of speaking and walking; her head began to enlarge, and the child became worse and worse, and more and more idiotic in her appearance and manners. When I first

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saw her she was lying with the eyes half closed, apparently sleeping, but constantly grating the teeth and rolling the head. The mother informed me that this was her usual state, but that twice or three times a day she would scream violently for an hour and a half or two hours, and then relapse into torpor. She never gave any signs of consciousness, merely swallowing food when it was placed in her mouth. Convulsive fits occurred about three times in a week. The head measured seventeen inches in circumference; there were two large prominences at the posterior part, one also over each ear; the forehead was very prominent; the pupils were dilated, and the movements of the iris very sluggish; the skin was cool and dry; pulse 160; tongue dry and whitish; bowels much confined. The mother had taken the child, for the last two months, to a large hospital, but was obliged to relinquish her attendance there, as motion was very distressing to the patient.

As this case had been under the care of a physician whose name was a sufficient guarantee that the usual remedies had had a judicious trial, I thought myself justified in trying a new mode of treatment. I therefore ordered half a grain of iodide of potassium to be given every four hours, and five grains of compound scammony powder at night, when the bowels required it. (The latter was only given twice—on the first and fourth nights.)

For the first four days the only apparent effect was a gradual diminution of frequency in the pulse, which sunk to 140, but after that time there was evident and progressive improvement. The unnatural prominences on the head began to diminish; the screaming fits became shorter and less frequent, as did the convulsions; the rolling of the head was no longer constant; the irides became more active. After a fortnight's continuance of the treatment, the head measured fifteen inches, the child slept quietly, and when awake, appeared sensible, recognising its parents, and making signs for food; the animal functions were all performed; the patient was rapidly gaining flesh. The iodide of potassium was continued until the 2nd of November, when the child appeared perfectly well; the head then measured fourteen inches.

Since that time fits of screaming have recurred twice, but yielded immediately to a repetition of the medicine. I saw her last on the 14th of December, when she seemed quite well, and as intelligent as most children of her age.

REPORT OF A

CASE OF COMPOUND FRACTURE OF THE RIGHT LEG, WITH EXTENSIVE LACERATION; SECONDARY AMPUTATION; DEATH.

By E. S. Crook, M.D. Edin., Leyland.

I was hastily summoned, about half-past five P.M., April 1st, to visit Catherine B., aged ten years, whose leg had been severely injured in the "cog-wheel" of a "bark-grinding mill" at a tan-yard. On my arrival, I found an enormous wound involving the whole of the integuments of the anterior, interior and posterior aspects of the right leg; the course of the wound was dingonal, from the outer side of the patella to the posterior of the ankle, the internal surface of the tibia was denuded for three or four inches, as also the whole patella, with its ligament; the fibres of the gastrocnemius muscle were considerably lacerated. The detached flap at its central and broadest part was seven inches in width, and had the appearance of having been crushed after laceration, synovial fluid seemed to be escaping from the inner side of the knee-joint, but no distinct wound was apparent. The anterior edge of the tibia was splintered; a fracture extending nearly vertically, and involving some inches of the bone, was visible, but as some portion of it had not been denuded, it was impossible to ascertain the extent with accuracy. A great quantity of blood had been lost, and there had been considerable vomiting before I arrived, which was about two hours and a half after the accident; the residence of the child being close to the site of injury, a distance of three miles from my house. The hæmorrhage and vomiting, however, had then ceased. The surface of the body was cold, the pupils were slightly dilated; but the pulse was between 90 and 100, of moderate tone, and equal in rhythm. As reaction appeared to be commencing, I did not think it right to administer stimulants, with the exception of the application of warmth. As far as the irregularity of the laceration would allow, by means of sutures and adhesive plaster, I brought it into the condition of an incised wound, applied a bandage tolerably firmly over the whole limb, placed it in "Liston's double inclined-plane," with foot-piece, and ordered the bandage to be kept continually moistened with cold water; at the same time expressing my apprehension to the friends that mortification would supervene, and render amputation necessary. The following medicine was prescribed: mercury, with chalk, four grains; extract of hyoscyamus, two grains. Mix for a pill to be taken immediately. Solution of acetate of ammonia, an ounce; tincture of hyoscyamus, two drachms; camphor mixture, three ounces. Mix. A tablespoonful to be taken every two hours.

April 2nd.—The child has had no sleep; is very restless from the excruciating pain, and complains of the limb being numb; the leg is much swollen, and has an inflammatory blush extending some distance above the knee, especially in the ham. There are great thirst and headache; the pulse is full, but soft, and about 120; the bowels have not been moved; drink is rejected. Warm applications have been substituted for the cold. Five grains of calomel, with a tablespoonful of castor oil, are to be taken directly; a tablespoonful of an eight-ounce effervescent mixture, containing twelve minims of prussic acid (P. L.,) with three drachms of solution of the muriate of morphia, is to be taken every hour.

3rd.—The limb is more swollen, and less sensible to feeling; the blush is of a very livid hue, and now occupies the whole ham; the pulse is about 120, soft, small, and irregular; the vomiting is very troublesome; the skin dry and hot; the pupils are irregular, one contracted, the other dilated; the bowels have not yet been moved; the tongue is but slightly furred; there is considerable pain in the abdomen. The child dozes a little, and has been very delirious and restless; the features are sunken, and appear about to assume the hippocratic expression. A table-spoonful of a warm aromatic aperient is to be taken every hour until the bowels are opened. The dose of morphia in the effervescing mixture is lessened one third. The sutures have been taken out, and warm poultices applied. A tablespoonful of port wine and water every three hours.

4th.—The bowels have been opened three times since yesterday; the sickness is not so urgent; the delirium is less; she has slept four hours at once; she complains of no pain; the facies hippocratica is now evident; she has asked for and eaten some bread-and-butter; the thirst is not so troublesome; the pulse is about 130, weak, and small; the surface of the body is cooler, and the girl expresses herself as feeling more comfortable. The temperature of the leg has increased; it crepitates under the finger; the wound gapes widely, and discharges a fœtid, sanious pus; sensibility to touch has still diminished; a distinct line of demarcation is

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forming immediately above the patella in front, and from the commencement of the limb posteriorly to within four inches of the foot anteriorly, and behind down to the ankle. The port wine is to be increased in quantity; a tonic medicine with an opiate prescribed. Yeast poultices are to be applied, and to be changed every four hours. The father is informed that amputation is indicated.

5th.—Detachment of the slough has commenced; the hamstring muscles are visible, and it is evident that the whole of the integuments, probably the muscles as well, will slough off. The pulse is as yesterday; the tongue clean; the skin cool; the vomiting has ceased; the appetite improved; the bowels have moved twice since yesterday, and the abdominal pain is relieved. The necessity of amputation was again urged upon the father, but refused. The medicine, wine, and poultices are therefore to be continued as yesterday.

6th to 13th.—The process of detachment has proceeded, and is now completed. The limb is bare to the extent before mentioned; the muscles, both of the anterior and posterior regions, are involved, and can be detached piecemeal with a sponge. The tibia is seen fissured and splintered; no reparatory process is visible. The child is rapidly weakening, in spite of arrow-root, port wine, broths, and the medicine. To-day (13th) the father has requested me to operate, if I see any chance of recovery. I consented to do so, provided the child had not materially altered by my visit on the morrow.

14th.—The child is in very great pain; her pulse is 120, soft and small; the bowels are not loose; the surface of the skin is moderately cool; the appetite is not so good as it has been; she slept but little during last night; is not at all delirious, but perfectly conscious, and converses with her family. Confident that from such a source of irritation nature must soon yield, I considered it incumbent to have recourse to the operation, and strive to save my patient even at the eleventh hour. I amputated the thigh through the middle, by the lateral flap operation, this morning. The hæmorrhage was very trifling; four vessels required ligatures, and the flaps were brought into apposition by the usual means. She was then placed in bed. During the operation she fainted, but speedily came round upon the administration of a stimulant. For about half an hour afterwards she appeared to be doing well; the pulse was the same as before the operation; she suddenly jumped up, and complained of a pain in the cardiac region; when laid down she cried loudly to be raised, the pulse became smaller and quicker, her pupils dilated, the surface, in spite of internal and external stimulants, gradually become cold, pneumonia of the dying was evident, and in exactly one hour after the operation she expired.

Remarks.—Had the patient been an adult, I should have performed immediate amputation; but knowing the reparatory power of nature in young children, I felt anxious to give her every possible chance of struggling through the consequence of the injury. I believe, that had the operation been consented to four days after the injury, when it was pressed and urged upon her parents, the girl would most probably have recovered.

OBSERVATIONS ON THE TREATMENT OF SOME OBSTINATE DISEASES OF THE SKIN, AS PURSUED IN THE PARISIAN HOSPITALS.

By James W. Begbie, M.D., Edin.

LUPUS.

In looking over the various methods of treatment which have been employed in lupus, it is curious to observe the great diversity of opinion that has existed, and still exists, in regard to the comparative efficacy of general and local medication, some condemning constitutional treatment as altogether useless, and others strongly recommending its employment. It appears to me that the most successful treatment of lupus will be found in a happy combination of constitutional remedies, and local applications, and to the truth of this, my observations in the Hospital Saint Louis amply bears witness. Lupus, M. Devergie divides into two classes, *lupus exedens* and *lupus non exedens*. It is of the former I wish now to speak. This, the lupus exedens, may be further distinguished as *tubercular* and *non-tubercular*, the chief differences between these two being, that the tubercular form is deep in its ulcerations, rapid in its progress, hitherto little amenable to treatment, and has its seat almost without exception on the face. The non-tubercular is a true lupus exedens, yet is less rapid in its progress than the tubercular, less deep also in its ulcerations, gaining extent more by the surface of the skin than by corroding deeper textures, is more amenable to treatment, and almost invariably has its seat upon the trunk, usually the back or shoulders are the parts affected by it. It has been seen but very rarely on the face. It is in the constitutional treatment of lupus that M. Devergie places most confidence, and the remedy I have seen most successful in his hands is the cod-liver oil. Many authors have spoken of a connexion subsisting between lupus and phthisis, and it appears at least to be true, that frequently patients suffering from lupus are carried off by tubercular deposits in the lungs and abdomen. The interest of this connexion will be increased if its existence may not be considered as having received a further proof, when the fact is established, as I think it cannot fail to be, that as in phthisis, so in lupus, the best, I had almost said the only remedy, is cod-liver oil. The oil is sometimes prescribed after the English fashion, in dessert spoonfuls three times a day; more generally the doses are small, and repeated at lesser intervals. In all the cases I have seen treated in this way, the oil has been prescribed immediately after the patient's entrance into hospital; in most, its continuance for a few days has been sufficient to produce a favourable change in the appearance of the disease, while in almost all its persistent use for a period of weeks has resulted in cicatrizations of the part affected, and in a greatly improved condition of the general health. Some cases I have seen resist this treatment, and that after a very fair trial of the oil; but in all these, it is worthy of note that the constitution was thoroughly impregnated with the syphilitic taint.

In cases of this kind I have generally seen M. Devergie adopt a mixed treatment, and in two such, the exhibition of mercury in small doses along with the oil was followed by the best results. Iodine in its various forms, and arsenic in its scarcely less numerous, I have seen employed in the treatment of lupus, but with results greatly inferior to those obtained by the cod-liver oil. In respect to local applications the proper period for having recourse to them is when constitutional treatment has failed to produce a perfect cure. The epispastics generally employed by M. Devergie is the chloride of zinc made into a paste with a little flour and water. After its application, which should be confined as nearly as possible to the part affected, the paste soon becomes solid and hard, it remains attached in general for about five days, after that it separates, and if its remedial powers have been properly exercised, a cicatrix is disclosed which remains permanent; if instead of a cicatrix, fresh tubercles are found making their appearance, the paste must be again employed. It is comparatively seldom that two, and very rarely that more than two, applications of the epispastic are required. M. Devergie regards it as very favourable for a patient affected with lupus, to suffer a slight erysipelas, and af-

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good effects of epispastics he considers to be due in a considerable measure to the occurrence of an erysipelatous inflammation in the diseased part.

My chief object in this communication is to direct attention to the efficiency of cod-liver oil in the treatment of lupus exedens. In the excellent work on diseases of the skin by the late Dr. Thompson, and edited by Dr. Parkes, mention is made of the employment of cod-liver oil in lupus, but not of the measure of success which followed its exhibition. My observation in Saint Louis allows me to speak most strongly on this point; and as embodying my experience in few words I may give the following conclusions:—

1. That the constitutional treatment of lupus by cod-liver oil is eminently useful and successful.

2. That when the constitution of the patient suffering from lupus is strongly affected with the syphilitic taint, a method of treatment such as that already adverted to in this communication will probably be found more successful than the exhibition of the oil alone.

3. That epispastics should only be employed when constitutional means have failed to produce a perfect cicatrix. Probably the best epispastic is the cloride of zinc.

(To be continued.)

ON A CASE OF

EXTENSIVE DISEASE AND ENLARGEMENT OF THE LIVER, AND DISEASE OF OTHER VISCERA, IN A WORKMAN AT A CHEMICAL FACTORY.

By T. F. Brownbill, Esq., Surgeon to the Salford Workhouse.

John R., of Salford, aged forty-eight years, engaged in the manufacture of bichromate of potash, married, and of temperate habits, had six months ago, a violent attack of acute rheumatism, for which he underwent the usual treatment of calomel, opium, and colchicum, purgatives, &c, and the duration of which complaint was about ten weeks.

After subsequently attending to his employment for a fortnight, he was seized with an attack of dysentery and vomiting, and complained of violent pain in the left hypochondrium, having at the same time a scanty secretion from the kidneys, the urine being of a very high colour.

These symptoms continued till within a week of his death, when he became jaundiced, and had extreme pain in the epigastric, and both hypochondriac regions, accompanied with a great deal of swelling of those parts, and pain in the left iliac region, being at the same time very confined in his bowels. He had also a short cough, the expectoration being frothy and tinged with blood for a few days previous to death.

The treatment consisted of calomel and opium, and sedatives of various kinds, together with counter-irritation over the liver. All however was in vain, for he gradually sank, and died on the 13th of September, in great agony.

Post-mortem examination, twenty-four hours afterwards.—The body was emaciated; the lower part of the ribs and epigastrium were very prominent, being pushed outwards by a large tumour, which could be distinctly felt extending across the whole body. The left lung was adherent over its whole surface, and both lungs were full of dark-coloured blood. Heart small flaccid, and empty; there were no adhesions to the pericardium, though there were one or two spots on the surface of the left ventricle, indicating inflammatory action. The liver was enormously enlarged, occupying the epigastrium and both hypochondria, and pushing up the diaphragm, with the heart and right lung. It was of a scirrhous character, having an immense quantity of deposit in its substance; in some parts it seemed to be composed almost entirely of scirrhoid matter. The weight of the entire liver was twelve and a half pounds. The larger spots on its surface were for the most part very red, but the smaller ones were of a white brain-like colour. The more healthy parts of the liver were of a greenish-brown colour, as if containing thick bile. The gall-bladder was small, and contained a small quantity of thick viscid bile. The stomach was nearly empty, containing only about four ounces of thick dark-coloured fluid; the internal coat was much inflamed, and ulcerated in many parts. The spleen was engorged with dark-coloured blood, but seemed otherwise apparently in a healthy state, though it was twice its natural size. The intestines were, for the most part, in a healthy state, excepting the lower part of the ileum, which was in a high state of inflammation, and in some places seemed to be in the first stage of gangrene; the calibre of the bowels at this place was very much diminished by the great thickness of their parietes, which were one-third of an inch thick. There was no urine in the bladder, but the rectum contained a little hardened faeces. Some flakes of coagulated lymph floated about in the cavity of the abdomen.

The subject of the preceding sketch was a foreman in an extensive manufactory of bichromate of potash and nitrate of lead, besides many other chemical products. The gases &c., arising from several processes conducted, were said by the workmen to be very noxious, and the above patient always complained of a smarting pain in the pit of his stomach whenever he inhaled any of them.

One very striking effect which this kind of employment has on the workmen is, that by successive ulcerations the septum nasi has, in many instances, been perforated to the extent, in some, of the size of a shilling.

The most extraordinary part of this case is the immense size of the liver, which was certainly the largest I have ever had the opportunity of seeing; but the inflammation of the stomach and bowels was no doubt the immediate cause of death.

It would be interesting to determine whether the man's employment had any effect in the development of this disease, both as regards the liver and the inflammatory state of the intestinal canal. If any of the readers of The Lancet could furnish any analogous case in elucidation of the above, it would be taken as a great favour.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Meetings in May, 1851.

Dr. W. B. Ryan read an abstract of a paper on the communicability of gonorrhœa, in reference more particularly to medical jurisprudence.

He was called on the 15th of the present month to examine two children, sisters, aged respectively one and four years. He found both labouring under a profuse puriform discharge, in the elder child of a fortnight's duration, in the younger of nine days. There was much fever; the parts, particularly in the elder, were much swollen, and both suffered great pain in passing water. The mother had no notion of the nature of the affection until an old woman told her the children were diseased. The whole thing became thus explained:—A young woman in the house laboured under gonorrhœa, and had been observed using the children's sponge to her private parts, and in the same vessel that was used for washing the children. Had there been but one child, Dr. Ryan remarked, he might have passed it over as an ordinary, yet aggravated, case of vaginal discharge in a child, but as there were two consecutive

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ly affected, sisters of this tender age, with the infectious cause so easily traceable, he thought it worthy of record, and endeavoured to make it as plain as possible by further inquiry. He therefore saw the young woman. She had gonorrhœa, under which she had laboured during the last two months, using no means for curing it. She said she *did* use the children's sponge as mentioned, but thought it more probable that the eldest child, having frequently sat on the same vessel as she herself did, to pass water, was thus infected, and that the second took it from the sponge used for both. Some of the discharge was taken from *each of the three*, and the valuable assistance of Mr. Quekett sought for. He examined the discharge under a magnifying power of 500 diameters. In that from the children there was scarcely anything but pus globules, thick and well defined. The discharge from the young woman in whom the disease had been wearing itself out during two months, was of a more sanious character. There was epithelium in abundance, a few mucous, and also pus globules, diffused, but occasionally more aggregated. Dr. Ryan remarked the paucity of well-recorded cases of this nature given by elementary writers. Indeed, some of our best authors say that gonorrhœa is communicated by impure connexion, and there leave the matter. Thus Cooper says,—"From the manner in which the disease is contracted," &c.; Liston,—"that people come with all sorts of stories: of water-closets," &c. Forsyth speaks of it as a disease "after impure coition." Beck, speaking of vaginal discharges in children, where strong suspicions were entertained by the parents against a third party, of the discharge being gonorrhœal, bestows not the least attention in pointing out how the disease may be contracted in the manner above related, and how, consequently undeserved suspicion may attach to an innocent person, to be followed, perhaps, as heretofore, by punishment. And Taylor, in giving, as one of the four sources of evidence of rape, the existence of gonorrhœa, adds shortly after:—"If the child be labouring under syphilis or gonorrhœa, this is positive evidence of impure intercourse either with the ravisher or some other person." Dr. Ryan then made some remarks on the case as showing its important bearings on some points connected with the jurisprudence of cases in which violation has been supposed to have taken place.

Mr. Dendy said, that however valuable the cases detailed might be, still they did not appear to him to contain any novel facts. It was well known that contact of the virile organ was not necessary to the production of gonorrhœa. What remedies had been applied in this case, and what evidence existed to prove that the cases were not those of severe leucorrhœa?

Dr. Ryan had only seen the cases two days before, and little treatment had as yet been adopted, simple alum lotions being the chief. With respect to the case being leucorrhœa, he thought the violence of the first symptom would prove that this could not be the case.

Dr. Hutchinson read a paper upon the

SYMPTOMS OF PULMONARY CONSUMPTION.

This disease is so common in our land, that (he said) it need add an apology for venturing to speak upon it. He desired merely to observe upon those points to which his attention had been particularly attracted, there still being room for facts to lead us to determine the presence or absence of the disease in question. There are three great symptoms—*i. e.*, primary symptoms—of consumption. 1. Loss of weight; 2. Diminished breathing movement; 3. Morbid breathing sounds; and in this order they present themselves.

Of the Loss of Weight.—This is a constant and primary sign; and there is no evidence of this disease when the weight is undiminished. If we can be sure upon this point, we are safe to affirm that there is no evidence of consumption. Happily, the patient's word can generally be depended upon; they seem to know and to speak with confidence upon the question of their loss of weight. This sign gives the first grea mental bias of the presence or absence of consumption. True, a person may lose weight and not have consumption; but he cannot have consumption and not lose weight. A table exhibited before the Society gave the result of 3000 observations upon healthy weights in men. This appears to increase in an arithmetical relation with the height—about 6lbs. per inch from 5ft. to 6ft., the mean at all heights being 155 lbs. Compared with this, 1000 observations upon weights of phthisical patients were exhibited, the difference was very great, being only 111 lbs. for the men, and 104 for the women; or joining the male and female phthisical weights, the mean difference between the healthy and the diseased is 38 lbs. Such is the effect of the ravages of this disease. A patient may have phthisis and weigh as much as a man in health; but though the expression of weight is the same, the difference is great in their relative character of weight; the healthy 10 stone is not like the phthisical 10 stone weight. We can indeed only judge of the improvement or otherwise in the patient by the weight.

The Second Sign is Diminished Mobility in the Breathing Movements.—The chest next changes in its form and movement in respiration. The healthy chest is *erect*; shoulders point backwards, and the deep inspiration is symmetrical, and swells out plentifully under the hand when laid over the upper ribs. The phthisical chest is *not* erect, the shoulders incline forwards and inwards, and the movement in respiration is more limited and pinched, besides oftentimes non-symmetrical. The volumes of air expired relative to the healthy and diseased cases is greatly different. By the spirometer which the author had constructed—merely a machine for measuring air—it shows the difference to be as 79 to 237; and in the first stage of phthisis as 129 to 222, or a deficiency of 42 per cent. As these figures differ, so the healthy movement differs from the diseased movement. The action of the intercostal muscles were then illustrated by a machine, showing without doubt that an oblique tension between two bars alone, elevates or depresses the bars *independently* of any other force, and hence each series of muscles antagonise each other, and give us independent means of breathing by each intercostal space. (See Art. "Thorax," Encyclo. Anatomy and Physiology.)

The Third Sign is that of Morbid Sounds.—These are primarily of two kinds; sounds affecting the volume of air entering, as harsh, deficient, feeble; and secondly, sounds produced by morbid secretions, as click, crackle, crepitation, or gurgle. These latter were of two kinds only,—a dry crackle and a moist crackle, —indicative of crude tubercle and softened tubercle, or inflammation of the lungs. The author merely hinted at these points as a rude outline of what he had, by experience, found useful. These three signs—weight chest mobility and form, and morbid sounds—appear in regular order; the third cannot exist without the second, and the second cannot exist without the first sign. They might exist without phthisis, but when indicative of phthisis, their character was well marked. The paper was illustrated by very numerous diagrams and tables, indicative of thousands of observations upon the different points touched upon. The numerous collateral signs were too many even to name; a table of them has been published. The primary signs were signs clear to be determined, and definite in their existence; and he believed they would be found useful adjuncts in determining the question of the presence or absence of phthisis pulmonalis.

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Dr. Sibson said that in many cases we must estimate the loss of weight and the diminished breathing capacity of a patient, not by comparison with the average weight and average breathing capacity, but with their actual state when the patient was in health. In a paper in the *Medico-Chirurgical Transactions* he (Dr. Sibson) had recorded the instances of two men who were each five feet nine inches in height; but while one of these could expel 290 cubic inches at one expiration, the other could only expel 200; yet in both the lungs were healthy. In another remarkable instance cited in the same paper of a man in the last stage of phthisis, who died within a few weeks, the breathing capacity was 246 cubic inches. With regard to the intercostals, their action is uniform in reptiles and birds, all the external intercostals being inspiratory, all the internal expiratory. This arrangement is completely modified in man and those animals possessing an efficient diaphragm. The lung being rapidly lengthened during inspiration by the descent of the diaphragm, the upper lobes of the lungs are shielded from atmospheric pressure by a firm bony covering. In the bird, the upper part of the lungs are not protected by ribs in front, whereas the abdomen is shielded by a firm bony covering. In the mammalia, on the other hand, the upper part of the chest is roofed over by a progressively narrowing series of ribs, and by the sternum, while the abdomen is exposed so as to allow the free descent of the diaphragm and the free movement of the lower ribs. In the bird, all the ribs move parallel with each other, but in the mammalia the upper ribs converge during inspiration, while the lower ribs diverge, this arrangement depending in part as he had shown in a paper in the *Philosophical Transactions*, on the different angles formed by the upper and lower ribs with the upper and lower part of the arched dorsal column. This different relative movement of the upper and lower ribs explains the remarkable contest between Haller and Hamburger. The former physiologist observed that the upper ribs converged during inspiration, and he, right in part, erroneously inferred that all the ribs converged. Hamburger on the opposite side, only observed the divergence of the lower ribs, and he thence inferred that all the ribs diverged. Those illustrious men were both right as far as they observed, but they erred through observing, not the whole, but a part only of the costal movements. To meet the varied relative movements of the ribs to each other in the mammalia, the action of the intercostals is varied in a remarkable manner, being beautifully adapted everywhere to the varied movements of the ribs. The upper external and internal intercostals are both inspiratory, combining to approximate the upper ribs during inspiration, while the lower external and internal intercostals are both expiratory, combining to approximate the lower ribs during expiration. Between the intermediate ribs the external intercostals are, as in the bird, throughout inspiratory, the internal throughout expiratory. He would be happy to show to any physiologist the respiratory action of the intercostal muscles of the living chloroformized dog.

Mr. Richardson thought the action of the diaphragm was sufficient to account for the deeper respiration that a tall man was able to make than a short one. He inquired how the author of the paper explained the occurrence of emacition long before the lung could be sufficiently diseased to explain that symptom. With respect to the morbid breath sounds as indicative of disease, he mentioned a case in which all the signs of phthisis were present, but in which, after death, the disease was found to be pleuritis with great effusion.

Dr. A. P. Stewart wished to make some observations on the early symptoms of phthisis. He inquired whether in the hospital for consumption the presence of pain under the left nipple had been found in any large number of cases an incipient symptom of phthisis, or was it sometimes connected with dyspepsia? Stress was laid upon the lengthened expiratory murmur; but he thought the most valuable of the early signs of phthisis was the *souffle* under the clavicle; even when the other symptoms had been absent, he had diagnosed consumption from this symptom alone.

Dr Cotton had not observed the pain under the left nipple as an early sign of phthisis. The prolonged expiration, however, was a very valuable aid to our diagnosis on this point. The souffle might occasionally be present, but was not to be depended on; such a bruit might be observed in anæmia; and in some cases, the mere pressure of the stethoscope might have the effect of producing it. The three points discussed by the author of the paper were very good so far as they went, but he had not sufficiently enlarged upon some of them. For instance, other sounds than those mentioned might be present, and afford as much information as to the condition of the lung. The loss of mobility was not detected always in early phthisis, but the disease could not progress to any extent without this sign being present. The loss of weight was one of the most important inquiries and circumstances connected with phthisis.

Dr. Hutchinson would have replied to all the statements of Dr. Sibson, had the time of the Society permitted it. Dr. Sibson had generalized from one fact: he (Dr. Hutchinson) had founded his opinion upon thousands of facts. The contest at the present day, respecting the intercostal muscles, offered no exception to those which prevailed formerly—they destroyed friendships; and since he had shown Dr. Sibson the machine which demonstrated the action of the muscles, Dr. Sibson had not spoken to him. The pain under the left nipple was not absolutely a symptom of phthisis. With respect to percussion and the physical signs of phthisis, to which he had not alluded in his paper, these had been enlarged upon by him in his published essays; and time did not allow to go further into particulars than he had done.

Mr. E. Canton exhibited a specimen of

ORBITAL EXOSTOSIS

which he had removed from a female who applied to him at the Royal Westminster Ophthalmic Hospital. The patient is between twenty and thirty years of age, and in good health. She stated that seven months since she not feel that her right eye began to protrude, and from that period to the present, the projection was steadily on the increase, at the same time that the organ was directed outwards. No pain was felt; vision was perfect; but the disfigurement was so detrimental to her as a servant, that she was anxious for its removal. On examination, it was found that besides the symptoms mentioned, the orbital ridge was increased in thickness, and a hard tumour, continuous with it, passed downwards, and deeply backwards into the orbit, so as to press upon the upper and back part of the eye, and cause a projection of the latter. Mr. Canton having placed the patient under the influence of chloroform, made an incision from the external to the internal angular process of the frontal bone, in a semi-circular form, immediately below the eyebrow. The integuments, orbicularis muscle, and palpebral ligament being cut through, the dissection was continued into the orbit and around the tumour, so as to free the latter from neighboring and adherent soft parts. A small chisel was then used, in accessible situations to the bone of the tumour, which by degrees became detached from the orbital part, and was withdrawn from between the latter and the upper and lateral part of the eye. Sutures, plaster, and water dressing were applied, and the

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patient in a week recovered, not having had a bad symptom. The sight on the affected side is nearly as perfect as on the sound one. The tumour is bony, about the size of a walnut, very heavy, and formed, towards the periphery, of compact bone; whilst within the structure is of a close reticular character. The size of the base is equal to the surface of a shilling. The compact part of the tumour shows, under the microscope, some very large Haversian canals.

Mr. Thomas Wakley exhibited the man William W——, who, for more than thirty years past, had been an object of considerable interest to surgeons, from the fact of his having recovered from very severe and extensive injury to the abdomen. The patient had applied to the Royal Free Hospital a few days since, on account of the appearance of hernia on both sides. Mr. Wakley briefly narrated the circumstances connected with the case. He said that the man was now fifty-eight years old; that about the year 1823 he was a seaman on board the *Minerva* whaler, off the coast of Greenland; the ship was made fast to a field of ice. The crew had captured three whales, and all hands were employed in "fleeching the blubber" with knives used expressly for that purpose, these knives being as long as a scythe, but straight and sharp as a razor. He had turned from his companions to micturate, and when again returning to his work, the deck being slippery from portions of blubber lying about, he fell forwards upon a mass of blubber, his "fleeching knife" lying upon it, with the edge turned upwards. By this accident, the lower part of the abdomen was completely opened from the anterior inferior spinous process of one side to the corresponding eminence on the opposite side. The intestines protruded on the thighs, and the penis was severed from the trunk. Mr. Williams, who was at that time surgeon to the *Minerva*, hailed the other two ships of the expedition, and obtained the assistance of the surgeons attached to those ships. Several bleeding arteries were tied: the intestines were carefully replaced within the abdomen; the edges of this extensive wound brought together, and retained in juxtaposition by numerous sutures; a catheter was passed through the incised urethra, into the bladder, and kept there two months. The bowel was not opened at any part although the peritonæal covering of the intestine is reported to have been grazed. The bladder was not wounded, owing, of course, to its collapsed condition, as the man had just emptied it of its contents. In less than four months the part had quite healed, and the man was able to employ himself in the easy work of the service. Mr. Wakley, in his remarks, said the case was a very instructive one to the surgeon, showing really, under favourable circumstances, what Nature, assisted by the surgeon, could accomplish. It was also associated with the names of celebrated surgeons who are now no longer amongst us. Sir Astley Cooper, Sir Charles Bell, and others, had considered the recovery so remarkable, that they had lectured to their respective surgical classes upon the man then before the Society. Sir Charles Bell, in his lecture, stated that the man must inevitably become ruptured; and the words of that eminent surgeon have become verified, but after the interval of more than a quarter of a century, during which time the man had undergone severe privations. The man had only become ruptured within the last two months; indeed, Mr. Wakley thought the fellows of the Society would consider the case unique as a recovery and long life after so severe and extensive an injury of the abdomen.

Dr. O. Ward inquired if any observations had been made, in this case, as to the mode in which Nature formed the valvular opening from the bladder?

Mr. Hunt briefly alluded to a case which occurred, many years since, in St. Thomas's Hospital, of a woman who had been stabbed in various parts of the abdomen One of the wounds involved the stomach, and required a ligature. Peritonitis followed, but the woman recovered.

Mr. Chippendale and Dr. Ryan said a valve, in the case before the Society, was not necessary, nor was there one present.

Dr. Ogier Ward read a paper upon

VENOUS MURMURS.

The author began by mentioning the discovery of the sound by Laennec, who, though he had a suspicion that one kind of murmur resided in the jugular vein, yet he was more disposed to attribute the various murmurs heard in the neck to the arteries, and to the bruit musculaire in the platysma and mastoid muscles. M. Bouillaud, who next took up the subject, having attributed the murmurs solely to the arteries, Dr. Ogier Ward was induced to investigate the subject in 1836, and he established it as an indisputable fact, that the sounds in question were produced by the veins alone, though they were modified by the vicinity of the carotid arteries as regards the internal jugular veins. These conclusions of the author were afterwards confirmed and extended by Dr. Hope and the Committee of the British Association, with a few unimportant exceptions; and were generally admitted by British physiologists, though the French pathologists still adhered to their former opinion. However, in 1843, M. Aran published an elaborate paper on the subject, and induced his countrymen to yield to him an assent which they had hitherto denied to foreigners. From that time the venous origin of the murmurs has been gradually acknowledged in France and on the continent generally. The author described the cause of the sound as being the quicker flow through the veins of blood of abnormal tenuity; and the difference in the tone of the murmurs produced by pressure on the vessel, to the formation and acceleration of currents in different directions in the vein below the point of pressure. The difference in the sounds produced by shaking oil or water in a bottle is a familiar illustration of this fact, which has been also established by numerous experiments, from which the following law has been deduced—viz: That the increase in the sound is directly as the velocity, and inversely as the density of the fluid. Whenever, therefore, the density of the blood is reduced below a certain standard.—which, however, varies with the individual,—venous murmur is the consequence Venous murmurs are of two kinds, continuous and remittent; the former is heard in solitary veins, as the external jugulars; the remittent murmur is heard in the venæ comitantes, in which the sound is augmented and remits synchronously with the beat of the artery, which modifies it by its pressure on the vein. The external and internal jugular veins afford the best and readiest examples of the sound, from the current of blood being quicker through them in consequence of their ordinary perpendicular position; but the sound ceases in the horizontal posture, or if the head be lower than the body. On the other hand, the sound is increased, and its tone rises to what is called the "musical hum," by slight pressure of the stethoscope, by which the rapidity of the venous current is augmented; and also during inspiration from the influence of the same cause. In examining the murmurs, care must be taken to avoid confounding the remittent venous sound with the intermittent bellows murmur that is often heard in the carotids. All observers, both in this country and on the Continent, except the British Association Committee, concur in confining the existence of venous murmurs to persons of weak constitutions, or suffering from disease or loss of blood. Hence it is met with universally in chlorotic and anæmic subjects, whose blood is deficient in several of its constit-

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tuents, but especially in red globules. Quotations from the works of Bouillaud, Andral, Gavaret, Becquerel, and Rodier, and their analysis of the blood of such persons, were given by the author in support of his statements. Dr. Ogier Ward, however, having remarked the frequency of the venous murmur in children, whether anæmic or florid, was induced to make a number of observations upon them, and the result he has obtained is, that all children, male or female, under seven years of age, exhibit the venous murmur. Above the age of seven or eight years it begins to cease in the boys, but in the girls it generally continues till after puberty and the establishment of menstruation, whether the person be pale or florid. The author has not been able yet to establish the average period of its cessation, either in boys or girls, but from the frequency of its occurrence in adult young women, he believes that a very slight derangement of the general health is sufficient to produce it in them. The greater proportion of water in the blood both of children and females he considers a satisfactory explanation of these facts. There is, however, so great a discrepancy in the analysis of the blood taken from such patients, that no exact limits can be assigned to the variations consistent with the health of the individual, as determined by the presence or absence of the venous murmur. From these statements it is evident that, with the exception of children, the existence of venous murmurs offers a pretty sure guide to the diagnosis and treatment of various diseases attended with a change in the condition of the blood. In the adult, the author has never met with a case in which tonic remedies were not useful, especially iron, unless the patient laboured under some form of disease that counteracted its influence. The selection of the preparation of iron best adapted to the case, must be guided by observation of other attendant symptoms. From a wish not to occupy too much of the time of the Society, the author declined entering upon the special applications of venous murmur to the diagnosis and treatment of disease.

In the discussion which ensued various fellows of the Society took part. The venous murmur had not been heard in healthy children by any of the speakers. With respect to the cause of the sound, various opinions were expressed. It was thought by some, that whatever obstructed the course of the blood in the vein, as the pressure of a stethoscope, might produce the sound. By others it was considered that some abnormal relation of the vessel to its contents must exist to produce it; whilst others suggested that a deficiency in the red globules of the blood was the main cause. It was shown that in pregnant women, in whom the murmur in question was usually present, the blood was deficient in the red globules. One observer had found the sound to be generally present in anæmic and weakly females, but he had seldom heard it in men. The sound was very circumscribed—confined, indeed, to one spot, and could not be heard if the instrument were not placed *exactly* over that spot. The persons in whom it was found were generally under twenty-five. Iron was the best remedy for the state of constitution with which the sound was associated. Another speaker had failed to detect the sound, if the stethoscope were not very small; the sound might be the result of the accelerated circulation in children and nervous females. If from disease, it would usually be accompanied by a murmur with the first sound of the heart. Would the explanation of the murmur given by Dr. Ogier Ward explain the placental bruit?

In his reply, Dr. O. Ward showed, from statistical tables, that the quantity of solid matter in the blood increased gradually from infancy to adult age. He regarded the sound in children, to be dependent on a watery condition of the blood, and not, as Andral had suggested, on a deficiency of the red globules.

Dr. Downing read a paper on

CATALEPSY IN RELATION TO OTHER DISORDERS OF THE NERVOUS SYSTEM.

After some preliminary observations, tending to show the wonderful character of the phenomena evinced in these cases, their rarity and mystery, the author alluded to the different lights in which they were regarded by people—the weak and ignorant believing them due to supernatural agency, the strong minded either denying them altogether, or attributing them to artifice and imposture. He considered it unnecessary to grapple with the two former objections. With respect to the last, more consideration was required, in deference to the opinion of the great men advocating it. The well-known doctrine of Cullen, for instance, that all cases of so-called catalepsy were feigned, he thought by far too sweeping an assertion. However well the slighter symptoms might be counterfeited, there was an utter impossibility of imitating, for a continuous period, all the phenomena displayed in the course of the graver malady. No actor, however accomplished, could sustain the character with consistency. Neither should the fact be lost sight of, that the disease may be genuine, although accompanied by a certain amount of deception. There is a frequent tendency to exaggeration in all nervous affections. It forms an essential part of the complaint. The physician who should pronounce the whole an imposture merely because he had discovered a portion of deceit, would run the risk of his judgment and humanity being called seriously in question; for the unfortunate patient too often seals the truth of his testimony with his life. Dr. Downing then proceeded to sketch the ordinary features of true catalepsy, distinguishing it from the carus ecstasia and carus lethargus of Dr. Mason Good, and the catochus of other nosologists. He believed, however, that all these species were intimately connected, frequently passed into each other, and were probably dependent upon nearly the same pathological condition. The passive energy of the muscular system, permitting the body to be moulded into almost as great a variety of attitudes as if it were a figure of wax or lead, was the distinguishing characteristic of the disease. It was an intermittent disorder, but had no approach to periodicity or regularity of accession. Neither was the duration of the trance by any means uniform. Instances were cited from Stearns and Bouvier, in which there were from 10 to 100 fits in the twenty-four hours. One that he had himself witnessed lasted more than four months. The usual termination was in complete recovery. The worst forms may, however, degenerate into epilepsy, apoplexy, or confirmed insanity. Rarely does it end fatally, although he had himself met with two such instances. Respecting the etiology of cataplexy, considerable obscurity prevailed. Among the predisposing causes were a highly nervous temperament, and whatever is calculated directly to weaken the body or to act powerfully on the mind, particularly religious enthusiasm, great mental application, and the passion of unrequited love. Sex has some influence, as females are more subject to the complaint than males. The affection is most commonly excited by some violent mental impression, such as terror, suppressed rage, and certain of the above predisposing causes when acting intensely. Of this, illustrations were furnished by Fornelius and Bonetus. Physical causes may also operate in its production; increased momentum of blood in the brain, worms, ungratified passions, and disturbance of the uterine functions, for instance. In fact, the causes of catalepsy may be centric or eccentric, or may partake both of a moral and physical character. Allusion was also made to the artificial production of conditions apparently identical with catalepsy by animal magnet-

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ism or mesmerism, pointing to the readiness with which nervous affections may be engendered, and the facility with which one state passes into another. The author said, that the scalpel had thrown little or no light on the pathology of this affection. Rarely was an opportunity afforded for dissection; but when there was, the evidence was very contradictory. According to Haller, Boerhaave, Lieutard, and Tissot, the same morbid appearances have been discovered in the heads of those who have died cataleptic as have been seen in the crania of persons who died of other and quite dissimilar diseases. In other cases, though the brain and nervous system have been carefully examined, no morbid changes whatever have been found. In Dr. Downing's opinion, we must not look for or expect necessarily appreciable morbid change. Catalepsy is a disorder of function, and organic change may precede or follow it, but does not, of necessity, attach to its existence. A part of the nervous system is put into state of unnatural irritation or excitement, which may leave no trace whatever, except to finer senses than our own, of its evanescent action. The suddenness of accession, the abruptness of termination, both tend to establish this view. In what light, then, are we to regard this anomalous affection? After alluding to the classification of catalepsy among the comata of nosologists, Dr. Downing said, that its alliance to two disorders was more especially deserving of attention. In by far the greater number of authentic and fully detailed cases, it appeared to have the strongest affinity to hysteria. They both occur in similar constitutions—they are convertible into each other—and are susceptible of relief from similar modes of treatment. From the fact of its so frequent commencement in, complication with, and termination in, hysteria, and the peculiarity of the phenomena affecting the muscular system only, he was inclined to hazard the conjecture, that catalepsy was identical with hysteria; but that its attacks are restricted to the motor, or efferent system of nerves; or rather, to that portion on which depends muscular tonicity. The other disorder to which catalepsy had a great affinity, is insanity. Cases illustrative are furnished by Dr. Gooch, Dr. G. Burrows, as well as by Boerhaave, J. Frank, Behrend, and Pinel. The *diagnosis* of catalepsy would offer less difficulties were it not for its occasionally wilful, or partially wilful imposition. So, again, in the discrimination between it and apparent death, care should be taken that the stiffness of the limbs be not mistaken for cadaveric rigidity. The one always ceases some time before the other sets in. On the hypothesis that catalepsy is but a form of hysteria, the treatment should be regulated. In Dr. Downing's opinion, however, more good is to be expected from passive than active remedies. The slighter cases will get well of themselves without assistance. In the graver instances little good has been afforded by medicine. The grand object, therefore, is to support the strength of the patient, so as to gain time for the more effectual operation of nature. The author then directed the attention of the Society to the recorded cases, and analyzed them carefully. Some few of those detailed by Sauvages, Boerhaave, Hoffman, and Sprengel, were doubtless genuine, but by far the greater number either feigned—he would not say fabulous—or wrongly designated. Tissot has collected a great many authentic histories. The latest, most instructive, and best marked cases are those recorded by Drs. Gooch and Burrows, to which allusion has already been made. Finally, Dr. Downing said that he himself had witnessed several examples of partial or general catalepsy, but that they all sank into insignificance in comparison with the extraordinary case he then proceeded to relate, and which he believed to be one of the most singular ever met with. It occurred in a fine, intelligent young man, twenty-five years of age, the son of an English merchant. He had been educated in France, where he became subject to epileptic fits, in consequence, it was supposed, of scanty diet. Subsequently, through disappointed affection, religious enthusiasm, and excitement of business, ambitious monomania manifested itself, for which restraint was employed. In April of the last year, the young gentleman was found in bed in a trance—in a perfect state of torpor—which persisted for four weeks, when he returned to his previous condition. On the 5th of July, a fresh seizure awaited him, attended by slight rigidity of the limbs. By the 2nd of October the cataleptic phenomena were fully developed, and gradually increased in intensity until his death, on the 16th of February of the present year. During all this time—a period of four months and fourteen days—the patient lay on his back, perfectly rigid and immovable, in bed. All his evacuations were passed involuntarily, and only at long intervals could he be fed, except by the aid of the stomach-pump. Yet there is every reason to believe that he was perfectly conscious of all that was passing around him, and spoke quite rationally during those short periods when his jaws were free from spasm. Unfortunately, no inspection of the body was allowed. Dr. Downing concluded his very interesting paper by some observations, suggested by this case, on the difference between the rigidity of disease and the rigor mortis; the close connexion existing between the different affections of the nervous system and the extreme susceptibility to impressions noticeable in the catalepic condition.

Dr. Camps said, although the author had remarked that catalepsy might exist without the presence of organic disease, he could not help thinking that in the instance just related a post mortem examination would have revealed organic change. Some of the symptoms appeared to him to be indicative of the presence of progressive of ramollissement. Persons affected with that disease usually imagined themselves great personages, and Dr. Downing's patient considered himself a saint, having a holy mission to perform. Some cases of catalepsy had not been alluded to by Dr. Downing, among the more interesting of which was that of Elizabeth Woodward who was in a state of catalepsy for one entire week. He (Dr. Cramps) recollected an instance in which a gentleman was so long entranced, that preparations were made for his funeral under the impression that he was dead. The great affection shown to him by his mother awoke him. Dr. Camps animadverted strongly on the early removal of lunatics to asylums, the result, as in this case, being generally unsatisfactory.

A Visitor mentioned a case of catalepsy occurring in his own practice, in which the disorder was only of a temporary character. The cataleptic state followed the administration of ether for a surgical operation. The catalepsy was complete, but consciousness was restored by the use of the strong liquid ammonia. This case proved that catalepsy did not necessarily depend on organic disease.

Dr. Snow asked if Dr. Downing had employed the inhalation of coloroform or ether in this case to relieve the spasm?

Dr. Downing replied, that in consequence of the excessive debility of his patient, such application was considered hazardous, and, consequently, was not resorted to.

Dr Snow thought it a matter of regret that ether or chloroform had not been employed twice a day to relieve the spasm and prevent the necessity of introducing the stomach-pump tube with such violence as to loosen the teeth, and to cause suffering, which it appeared, from the subsequent statement of the patient, it did. The spasm so relieved might have altogether re-

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moved the necessity of the use of the stomach-pump, as it had in some instances of mania. And, although, of course, it could not remedy the organic change, it might have had a temporary beneficial effect upon the disease. He thought that the debility present in this case did not preclude the use of chloroform, which was, in fact, a stimulant. Dr. Todd, in a case under his care, had prescribed chloric ether, or what might be called tincture of chloroform. Conium, ether, chloroform, and, indeed, many other narcotics, might produce a temporary cataleptic state.

Mr. Gay mentioned the case of a girl affected with epilepsy who had been under his care after having been dismissed as incurable from several hospitals. She was much emaciated, had rigidity of the limbs, partial closure of the eyelids, half-opened mouth, a feeble pulse, low inspiration, almost spasmodic expiration, and moaning. Apparently she was quite insensible to surrounding objects. Her food was pushed down the fauces, and swallowed; she had involuntary evacuations, and she remained in this condition for nine months. She was between twelve and thirteen years of age, and had never menstruated. The non-appearance of the catamenia was regarded as the cause of the disease. He was at first undecided as to treatment, but eventually determined on giving her grain doses of tartar-emetic. The first dose produced vomiting, and the pulse seemed to rise a little. After repeated doses the girl spoke, and began to move. She got well in about a fortnight. She was subsequently strong and healthy. Catalepsy was allied to hysteria and tetanus. He had administered the tartar-emetic in this case, because he had found it more effective than any other medicine he had employed in cases of traumatic tetanus. In one of these instances recovery took place, and in another the patient got apparently well, but whilst changing his shirt dropped suddenly dead. He agreed with Dr. Downing, that in many of these cases there could not be found any structural disease of the brain; but that the cause would be found to consist of a temporary condition of that organ dependent on some irritation in a distant part of the body.

Mr. Dendy said that catalepsy was usually symptomatic of some other disease. In the case under discussion, he believed that there was extensive disease of the brain, and that the patient died from starvation consequent upon the arrest of all the powers by the brain disease. Functional disorder, he believed, would soon induce structural change. The proximate cause in these cases he considered to consist in hyperæmia of the cerebral axis, which might be combined with a general anæmic condition, and the treatment consequently must have for its object the relief of the local congestion by local bloodletting, whilst the general anæmia was to be remedied by anti-spasmodic tonics. These cases were not very amenable to treatment, and might continue for a very long period. Several cases similar to the one related by Dr. Downing had come under his notice. He mentioned the case of a girl who became affected with well-marked catalepsy, and continued in that state for four days, she then suddenly awoke and ate heartily of bread-and butter. Subsequently she relapsed into the catalepsy, and remained in that condition for eight or nine hours. She recovered, but instead of being, as heretofore, a moral, well-behaved girl, she became depraved. He concluded that her mind had become affected by the disease.

Mr. Smith Palmer said that nervous disorders in women were much influenced by costive bowels, and suppression of the catamenia. He thought, in the case under discussion, chronic inflammation of the brain had been the result of functional derangement.

Dr. Forbes Winslow observed, that having had the advantage of seeing Dr. Todd's case of catalepsy, just narrated, and being much interested in the subject, he would make a few remarks in relation to it. It was a well-established fact, that catalepsy in its true form—unmixed and uncombined catalepsy—was a rare affection. So rare did Dr. Cullen consider the disease, that he maintained it never in reality occurred; that those cases which are considered and termed cataleptic, are always instances of feigned and simulated disease. Without assenting to so sweeping an observation, he (Dr. Winslow) would nevertheless admit that catalepsy was frequently feigned; true and unmistakable instances of the disease, however, are upon record. The affection frequently manifested itself in hysterical women, and also in men having the hysterical temperament. It was a disease nearly allied in its symptoms and progress to those anomalous functional disorders of the nervous system, included within that somewhat obscure but comprehensive term, hysteria. In this Proteau malady there was generally a disposition to exaggerate the nervous symptoms, and in many cases the disease was simulated altogether. In the affections termed cataleptic, extasy, trance, and other anomalous and allied conditions of nervous derangement, there was generally associated with the true tetanic rigidity of the muscular fibre some degree of imposture. He (Dr. Winslow) did not consider the case of catalepsy under consideration to be true and unmixed in its character. It could not be so designated. It was associated with both epilepsy and insanity. Independently of this, he (Dr. Winslow) thought it possible that the symptoms were, to a certain extent, feigned. Dr. Downing had spoken of the case as one unexampled in its duration. But he (Dr. Winslow) thought the case which Professor Huss, of Stockholm, had recorded, to be more extraordinary. Profes-or Huss's case of catalepsy was of thirteen years' duration. Other instances were to be found in the medical journals, equally and perhaps more extraordinary than the one under review. The author of the paper had cited as a remarkable fact in connexion with the case, the catalepsy having preceded the attack of insanity. This was not so rare an occurrence as was supposed. Jos. Frank had related the case of a man, who, struck by a feeling of remorse whilst hearing a sermon, rushed out of the church, and was seized with a paroxysm of catalepsy at the doors. His limbs became as stiff as iron, and remained in any position in which they were placed This man subsequently became deranged. He (Dr. Winslow) had often seen cataleptic symptoms precede attacks of insanity; he referred to those cases of morbid tonicity of the muscular system, associated with or caused by hysteria; but unmixed and uncombined catalepsy he had never seen precede a maniacal seizure. Tetanic spasm and rigidity of the limbs he had often witnessed in connexion with certain morbid states of the brain disordering the mind. With regard to the pathology of the case, it was difficult to speak. These affections were necessarily very obscure. Unfortunately, no post-mortem examination was permitted; so, in forming an opinion of the probable condition of the brain or spinal cord, they could only reason from analogous cases, and apply to the elucidation of the difficulty the general principles of cerebral physiology. Two of the preceding speakers had stated as their opinion, that in this case there was undoubted softening of the brain; and one gentleman came to this conclusion from the fact of the delusions of the patient being of an ambitious character. It was true that in the insanity which generally accompanied ramollissement of the brain leading to general paralysis, the ideas of the patient were frequently and almost always exalted. The patient would have notions of high rank unbecoming his status in life, or be impressed with ideas of being possessed of vast wealth. It would, however, be illogical to assert

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that this pathological condition of the brain existed simply because the patient, as in the case before the Society, had extravagant notions of his prophetic character. He (Dr. Winslow) would feel disposed to attach more importance to the morbid spasm and rigidity of the muscles as evidences of an organic change in the nervous tissue partaking of ramollissement. Looking at the character of the insanity as well as the catalepsy, he (Dr. Winslow) would be inclined to say that there existed in this case no real marked pathognomonic symptom of softening of the brain. The man had, up to the period of his death, a clear and vigorous intellect. When consciousness was manifested a short period before he was seized by the last paroxysm which terminated fatally, he gave, as Mr. Downing asserts, indications, not only of the absence of impairment of mind, but of a strong intellect. He conversed freely on various topics, manifested much intelligence, and spoke on scientific matters with considerable ability and strength of understanding. Certainly there were not the symptoms of organic disease like that of ramollissement of the brain, and ramollissement to such an extent as to produce that severe disorder of the muscular system under which he laboured. In this case, if there had been ramollissement of the brain, we might with some reason have expected, not only impairment of mind, but an affection of the motor power, very different in its character from that loss of control over the voluntary muscles connected with a cataleptic state of the limbs. True and combined catalepsy arose from various morbid states of the nervous system. It was frequently the effect of congestion of the brain or its investments—effusion—congestion, or other morbid conditions of the spinal cord. It had often an eccentric origin. In illustration of the latter observation, he (Dr. Winslow) cited a case of long-continued and severe catalepsy, which was suddenly cured upon the patient vomiting a clot of blood. It was also occasioned by irritation established in a remote part of the system, affecting some of the great nervous centres. It was known to be often the result of worms, and in early life the irritation of dentition is often known to cause severe spasm and a morbid rigidity of the muscles. In many cases of catalepsy we must look to the heart for the source of the disease. Certain morbid conditions of the blood would also give rise to the affection. Alterations in the delicate structure of the brain and spinal cord were sometimes the consequences of an abnormal state of the blood affecting nervous nutrition, and thus inducing disorders of the cerebro-spinal system.

Mr. CHIPPENDALE considered that Cullen's opinion respecting catalepsy was proved by the discussion of that evening to be correct, as all the cases detailed showed the affection to be consequent upon some other malady. He then mentioned an instance of catalepsy in a dog, consequent upon fear.

Mr. CHILDS mentioned the case of a policeman, who to avoid punishment for having been intoxicated whilst on duty, feigned a semi-cataleptic condition.

Mr. LATTY related the following case of

ANEURISM OF THE AORTA.

A military officer, aged forty-one, after twenty years' service in India, returned to England in October last, having, during the previous year, had repeated attacks of spleen, and been reduced to a state of great debility. On coming under his (Mr. Latty's) care, in the beginning of February, he was in the following condition: He was jaundiced, his lips bloodless; he had lost flesh, and complained of great debility; he had lost his voice, being able to speak in a whisper only; he had a hoarse, croupy cough, with scanty expectoration, which was glairy, more or less rusty or streaked with blood, and intermixed with sputa, having all the appearance of pus. When he slept through the night, he always expectorated, in the morning, one or two spuna of pure blood of a dark colour, which had evidently oozed out during the night. His pulse was quick and feeble, but quite regular; tongue foul, appetite bad, and urine scanty, very high coloured, and depositing a copious pink sediment. He had no fever. The right lung exhibited signs of being in a healthy condition. The left side of the chest afforded, upon percussion, a very clear sound as far as the nipple, below which there was a remarkable dulness. The vesicular murmur was very distinct in the upper part also; but all over the lower region, where the dulness existed, it was scarcely audible, and was accompanied by a slight crepitant râle. The heart's impulse was feeble, its action regular, and it emitted no abnormal sound. He had no difficulty in his breathing, either in walking or lying down. By appropriate remedies the digestive functions resumed their healthy condition, the lips became less anæmic, but no alteration whatever was produced in the cough or expectoration; he was gaining flesh very sensibly, and his strength had increased very much, when, on the 25th of April, he suddenly expectorated a large quantity of florid blood; the hæmorrhage ceased after a few minutes, and the expectoration resumed its usual appearance; but on the 1st of May it returned to a frightful extent, and soon terminated his existence. On examining the body after death the lungs were found perfectly healthy, except the lower lobe of the left, which was flattened, compressed, and dense in its structure, somewhat resembling its condition in the first stage of pneumonia, except that air could be forced into it. The heart was slightly hypertrophied, flabby and pale, the aorta, immediately from its origin, was dilated into a large aneurismal sac, which occupied the whole of the arch immediately in front of the trachea, and was firmly adherent to it; a pouch, about the size of a large pigeon's egg, sprung from the upper part of the sac; the arteria innominata arose from its base on the right side, and its upper portion was filled with firm coagula; there were two slight deposits of coagula in the large sac; the lining membrane of the trachea, through its whole extent, was of an intensely red colour; that portion against which the aneurismal pouch rested was bulged out, giving it the appearance of a vascular tumour, in consequence of the cartilaginous rings of the trachea having been absorbed, and resistance to the pressure of the aneurism thereby removed; four round, smooth openings, capable of admitting a common probe, existed in it. The pouch projecting from the aneurismal sac having been in a great measure removed from the current of the circulation, allowed the deposit of the coagulum, which had the effect of hindering the rapid effusion of blood that would otherwise have taken place when the process of absorption had made an opening into the larynx, and which, instead, produced a constant oozing of blood, thus very closely imitating ulceration of the larynx, from its continuance to such a slight extent, for so many months, without any more extensive hemorrhage till within a few days of death. The record of such cases may assist in forming a diagnosis in this very obscure disease.

Dr. ROUTH read a paper

ON SOME FALLACIES IN THE MODERN PRACTICE OF MEDICINE, MORE ESPECIALLY HOMŒOPATHY, AND IN ESTIMATING THE RESULTS OF PRACTICE BY IMPERFECT STATISTICAL INQUIRY.

He would not enter on the subject of the theory of homœopathy, but simply on that of the practice—i. e., the argument of experience. To prove this, homœopaths first disfigured the allopathic practice, and then advanced on their side statistical tables well calculated to

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deceive. In defence of rational practice, he adduced chlorosis, as an example in which the blood-globules and the iron contained in them were deficient. In a healthy per on the iron varied from thirty-three to forty-five grains—in appreciable quantity, which infinitesimal doses would not congregate in centuries. In the collection of these data, homœopaths overlooked three considerations—1st. Differences of locality, whereby type, variety, and amenableness to treatment, were greatly affected, illustrating this point by his experience on visiting the continental hospitals. 2ndly. The constitutional or prevailing diathesis of diseases in the same places might vary. The present type of British disease was adynamic; twenty years ago it was dynamic; hence many cases of homœopathic success now. 3rdly. There existed at present a peculiar mental epidemic, as it were, which often tended to effect cures; a tendency to perversion so powerful as, by its influence on the mind, to assist recovery materially. To this cause he ascribed several instances of cures and astounding results which he had obtained by colored water. He was one secret in homœopathic cures. That such was really the case was proved by the failure of homœopathy in the treatment of animals. The real cases of cure were only those in which, if left to themselves, the animal would have recovered, or where a most severe dietetic regimen was also conjoined. These alleged cures also were anonymous, or came second-hand, reported by non-medical persons. The alleged cures of farcy and glanders in horses, extending, as they did, over two to twenty-eight months' treatment, he believed were either not genuine, or chronic cases, where the disease had worn itself out. The argument from children was only negative. This class of patients was most of all susceptible to dietetic regimen. Dr. Routh then entered largely on the subject of the general mortality in hospitals. The homœopaths give a result of 4 to 6 per cent. The allopaths, sometimes as low as 2 per cent., gave a result usually of 7 to 9 per cent. This he illustrated by results from the different hospitals in Europe. Amongst the causes of this disparity he had traced the following:—

1st. Homœopaths excluded in their results the cases brought in moribund. Allopathy did not. He showed, however, a table of the mortality from fever in Belfast, from Dr. Mateer. This exclusion, in an average of eighteen years, diminished the mortality 23 per cent., and in 1841, 127 per cent. If it were so for one disease, what would it be for all.

2. Were the cases admitted as severe? Owing to the common prejudice against homœopathy, few severe cases came to them. They went to the allopathic hospitals. In one case he had seen one patient admitted for very slight headache; besides cases of intoxication, vast numbers of hysterical patients were included. This, by increasing the number of non-fatal diseases, necessarily diminished the per centage of mortality.

3. The numbers used were small; and they showed, from the Irish tables of hospital mortality, that no returns could be depended upon unless above 10,000. It was still 100 well-selected cases gave good results. He believed, however, from experience, they were only in the direction of truth. Another 100 cases equally well selected might give a direct negative. The best homœopathic returns were those obtained from small numbers.

4. Another source of fallacy was the different amount of comfort enjoyed by hospital patients. From personal observation he could state, that Fleischman's Hospital was unsurpassed in this respect by any other hospital he had seen. The students were either none or few in number, and the patients were not tormented by repeated manipulations.

5. They were both younger and of a better class. Out of 320 patients seen in that hospital by Dr Balfour, 280 were under 40 only 22 above. In the published account for Linz, in 1844, out of 555 patients, 478 were under 40. They were of a better class, not the very poor and weakliest. This he had personally remarked, so had also a Fellow of this Society, Dr. Glück. The effect of youth in arresting the mortality of disease generally was well exemplified in the army returns, where, out of some 400,000 admissions, the mortality was only 1 in 56. In the Navy, out of 300,000, 1 in 101.

He then alluded to the homœopathic returns from pneumonia, which had made so many converts among allopaths. Homœopaths were fond of quoting Grisolle's 304 cases, with a mortality of 13 per cent. Dr. Simpson had collected 909 from Briquet, Grisolle, the Edinburgh Infirmary, and Skoda, giving a mortality of 23 per cent. In opposition, Fleischmann's cases were quoted—300, with a mortality of 6 per cent; or from a larger collection, including the results of three other hospitals, 970 cases, with a mortality of 43 or 4 per cent. Many of the reasons above given would explain this; some require, however, particular mention.

1st. Pneumonia in Austria is seldom complicated, usually simple idiopathic. This he attributed to the extreme rarity of Bright's disease of the kidney in that country; and in many returns the complicated were usually classed under the head of the fatal complications, and thus escaped notice. The complicated were only distinguished from the idiopathic in the Linz returns. From 1843-6 there were 93 cases of idiopathic; only 8 of complicated: proportion, 8 per cent. In Dr. Tessier's 41 cases, the proportion was 14·6 per cent. In 140 he had collected, occurring in the practice of Drs. Taylor, Walshe, and Peacock, 55 per cent. were complicated. This would explain the difference of mortality. The cases of the Glasgow Infirmary, so often quoted by homœopaths, from 1843-45, were mostly all complicated, chiefly typhoid, and many brought in moribund.

2nd. Age was most important in pneumonia. The mortality was high above 40; low below it, excluding children. The army returns gave the mortality out of 12,000 cases as 1 in 29, sometimes as low as 1 in 45; the navy, 1 in 26; sometimes as low as 1 in 59, out of some 3300 cases. The best homœopathic return was 1 in 22; Fleischmann's, 1 in 16, and these were simple cases; the others mixed.

3rd. Sex was another most important feature. The distinction was not made by homœopaths. There were 75 males usually seized by pneumonia to 25 females; but the per centage of mortality among females was more than double. Indeed, by comparison in the Registrar-General's Returns for 1843 and 1844, calculating from 8300 fatal cases, the different numbers of persons living at each age, the per centage mortality to seizure from pneumonia, excluding children, was 100 males to 211 females. In Dr Tessier's 41 cases, 3 only were females; and if we took Fleischman's 19 cases, recorded by Dr. Balfour, as a sample of all, the results from the preponderance of males would be 4 per cent; too favourable.

Dr. Routh then gave an analysis of Tessier's 41 cases. There were 3 deaths; the cases were, 4 only of double pneumonia, 1 fatal; 30 of simple idiopathic single, 1 fatal; 1 secondary and fatal; 5 complicated. Of these 38 successful, 1 died, before leaving the hospital, of phthisis; another, of erysipelas: giving thus a mortality of 1 in 8. In the 38 besides, 6 had been treated also allopathically, and should be excluded; leaving 35 cases, 5 deaths, or 1 in 7. The cases treated allopathically had a shorter duration of treatment, and left the hospital soon after convalescence. For so many cases of idiopathic, and with so many males

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this was high. On the other hand, the analysis of 141 cases in the practice of Drs. Taylor, Walshe, and Peacock, gave 43 deaths; mortality 1 in 3; but in this number (141) there were 33 cases of idiopathic single pneumonia, 14 idiopathic double, 2 deaths, among males: mortality, 1 in 23; among the females, 5 of idiopathic single, none of double pneumonia: general mortality for idiopathic, 1 in 25. There were 9 cases of simple pleuro-pneumonia among males, and no deaths; giving a general mortality of 4 per cent. only. The remaining were complicated; 52 cases, 30 deaths among males, or 1 in 1·7; 26 cases, 12 deaths, among females: mortality, 1 in 2: total, 78 cases, 42 deaths, or 1 in 1·8. In 127 cases the age was stated:—61 males under 30, 35 above; 17 females under 30, 14 above; or 78 under 30, 49 above. After some remarks on the inert treatment observed in such cases by the Viennese allopaths, Dr. Routh concluded by giving examples where, under divers treatment, the mortality with Laennec, Wolf, Bouilland, Louis, Bouc. Husson, had been occasionally very low; adducing also the 11 of Grisolle, cured by emollients only. Declining, however, to deduce conclusions from small numbers, he finished by stating, that idiopathic simple pneumonia under 40 was a very benignant disease; instancing the cures effected by drinking cold water only in many of these cases, as recorded by the Belgian Commission, Drs. Moreta and Campagnani, in Italy. The best treatment in these cases appeared from the researches of Dr. Dietl, of Vienna, the allopathic physician to the Weiden hospital, to be simply the dietetic. Dr. Dietl (he quoted from Dr. Roth) had treated 85 cases of pneumonia by bloodletting, with a mortality of 20·4 per cent.; 106 by tartar-emetic, mortality 20·7 per cent.; and 189 by simple and strict dietetic regimen, mortality only 4·12 per cent. The bleeding often made the pneumonia complicated. He concluded by stating, that the homœopathic returns should be more carefully analyzed before credit was given them; he admitted the excellence of their dietetic regimen, but attributed their success wholly to the powers of Nature, and their selection of cases; and added, that, perhaps, even amongst ourselves, some good might result by trusting more to Nature and diet, where this could be done with safety.

The discussion which ensued was desultory; but it was generally considered that the question could not be fairly discussed, inasmuch as the statistics of the homœopaths could not be relied upon; and there was a general feeling of regret that the subject had been brought before the Society at all.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

May 22, 1851.

On the Application of the heat of Electricity in Practical Surgery. By John Marshall, F.R.C.S.

The author narrates a case of fistulous perforation of the right cheek occurring in a young man, twenty-five years old, of a strumous habit of body, and resulting from a succession of abscesses. The case had been under treatment several months when he became outpatient at the hospital; and after two months' attendance there, under the care of the author, without improvement, the following plan was adopted:—A fine platinum wire, 1-50th of an inch thick, was passed through the fistula in such a manner that its ends could be connected with the poles of a Grove's battery, consisting of four cells, each having a platinum surface of thirty-two square inches, and a zinc surface of thirty-eight square inches. The galvanic current was kept up for nine seconds; but little pain was felt from the action of the heated wire; sloughs appeared at both orifices of the fistula; that on the inner orifice came away on the fifth day after the operation; the outer one was separated on the sixth day. On the eighth day the inner opening was closed; on the eleventh the outer opening was also closed. A smaller sinus, of fistulous nature, was discovered some days afterwards on the inner surface of the cheek; and by a repetition of the operation, this was also cured within a fortnight. The author has been induced, by the success of the *electric cautery*, to employ it in cases of rectal fistulæ, and in both internal and external hæmorrhoids, and with similar success. He anticipates that its employment will occasionally be found advantageous, as compared with the knife, scissors, or ligature, in other cases where morbid growths require to be removed. A detailed description of the apparatus was given.

On the Benefit derived from the Inhalation of Chloroform in a Case of Pulmonary Consumption. By T. Spencer Wells, F.R.C.S.

The case was that of a nobleman, thirty-seven years of age, who had suffered from symptoms of phthisis for more than two years, and who passed the winter of 1849-50 in Egypt and Italy, under the care of the author. During the month of May, 1850, the patient being then at Rome, the extreme violence of the cough and the very oppressive dyspnœa, uncontrolled by the usual remedies, suggested the trial of chloroform. The effect of the inhalation was very successful, and every repetition of its use was equally so; and during the remainder of the patient's life (about seven months), great alleviation of suffering was obtained from its use, without any ill effects being observed. At the special request of his patient the author has been induced to publish the account which the paper contains. He has likewise used the inhalation of chloroform with advantage in two cases of spasmodic asthma; and is altogether sanguine in his expectation that this agent will prove a valuable palliative remedy in such cases.

On the Inhalation of Chloroform; its Anæsthetic Effects, and Practical Cases. By Robert Dunn, M.R.C.S.

Before entering upon the consideration of the physiological effects of the inhalation of the vapours of chloroform upon the nervous centres, the author deems it expedient to premise some observations on the functions of the nervous centres themselves, with a view to the better appreciation of the application of chloroform to practical purposes. After stating the generally-admitted threefold division of the nervous system into the physical, or excito-motory and reflex; the nutritive and secretory, or ganglionic; and the sentient, psychical, and voluntary, or cerebro-spinal system, he maintains that there is no point in physiology more clearly made out than that the great hemispherical ganglia are exclusively the seat of perception and its associate memory—the centre of intellectual action, and of all the operations of thought—"the sole receptacle," in the language of Cuvier, "where sensations become perceived and consummated," formed into ideas by their ganglionic action, and where the will exerts its power; but that they are neither the seat of sensation nor of motion. Of these, the former has its seat in the sensorium commune, or collection of sensory ganglia; and the latter, or motor power, in the corpora striata and anterior segmental ganglia of the spinal cord. Sensation is an act of simple consciousness—an attribute of the sensorium, and not of the cerebrum. The author says, sensation and perception ought not to be confounded; the functions are perfectly distinct, and have their seats in different nervous centres. The

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former is sensorial, and affected through the direct agency of the sensory ganglia; the latter is mental, and exclusively cerebral. The mechanism (so to speak) of their action is different. While, in sensation, it is direct and single, each sensory ganglion responding directly to the stimulus receivee, or impression made on its ganglionic centre; in perception, a double ganglionic action is involved. The various sensations or impressions of the sensory ganglia, as the first step in the process, are transmitted through commissural connexions to the hemispherical ganglia; and there, as the second step, become converted by the ganglionic action of the cerebrum, into ideas, which furnish incentives to intellectual action, and materials for thought. The corpora striata, thalami optici, and corpora quadrigemina, he says, are distinct cephalic ganglia, each exercising a different function, and that they with the nervous centres of the special senses and the cranio-spinal axis, constitute the nervous apparatus of automatic life. The thalami optici and posterior segmental ganglia of the spinal cord are the great centres of tactile and common sensation; the corpora quadrigemina are not simply the ganglionic centres of vision, but also of simple emotional impulses, readily excited into action by sight, and independently of the cerebrum. He maintains that the sensory ganglia are the seat of the emotional feelings, or, in other words, of the feelings of pleasure and pain associated with the emotional states; but he thinks, with Dr. Carpenter, that the true emotions, like the moral feelings and the animal propensities, are of a composite nature, involving an intellectual element, in all of which the feelings are of sensorial, and the ideas of cerebral, origin. The author then proceeds to inquire what are the feelings experienced, and the phenomena observed, during the slow and gradual inhalation of the vapour of chloroform. On this subject he adduces the testimony of Dr. Snow, and after giving the different degrees of narcotism noted by Dr. Snow, and the quantities of chloroform required to induce them, he goes on to trace the order and sequence of the effects of the inhalation upon the different nervous centres. The sensory and motor ganglia are the first to come under its influence. Sensation is suspended, and immunity from pain secured, while some degree of intellectual consciousness is still persistent. The function of the cerebrum, in the centre of intellectual act on, is the next arrested, and coma supervenes—a total abolition of consciousness, reducing life to a series of automatic movements; after this, the medulla oblongata and true spinal centres become involved. The ganglionic system is the last to be implicated; but with the arrest of the peristaltic action of the heart life ceases. He next considers the conditions necessary to secure uniformity of effect, and perfect safety to the patient; these are, that the chloroform be pure, and that the mode of inhalation be slow and regular, with a proper dilution of atmospheric air; and he avers, that there is not a single fatal case upon record where these conditions have been rigidly observed. The sources of danger are pointed out. The eye of the administrator ought never to be off the face of the patient. Chloroform destroys life as certainly as carbonic acid, if respired until the excito-motory and ganglionic systems come fully under its dominion. In the succession of effects, during its slow and gradual inhalation, the ganglionic system is the last of the sequence to become involved, and the contractions of the heart the last of the vital actions to be arrested; but the order is reversed when the lungs have been suddenly overcharged with the undiluted vapour, and the patient may die from the direct effects of the chloroform upon the heart, before insensibility has been produced and the nervous centres of the encephalon affected. As the inhaled chloroform is again eliminated from the blood and passes off unchanged by the lungs from the body, the author considers it may be fairly inferred, that it acts in its integrity as a whole, and not by its separate elements, upon the vesicular matter of the nervous centres; and that beyond the direct and immediate effects produced by its presence in the blood upon these centres, no lasting ulterior or injurious effects can reasonably be expected to result from its use. Its range as a therapeutical agent is in consequence limited, and its effects often transient; but present relief from pain is a boon to the sufferer, and its modus operandi in regard to the different nervous centres points plainly to the class of medical cases in which it has been found to afford relief. Neuralgia, spasmodic asthma, delirium tremens, hysteria, hysterical and puerperal, and some other forms of mania,—certain convulsive and spasmodic affections,—puerperal convulsions, chorea, epilepsy, and tetanus, are noticed, in which it has been administered with advantage. Still, the author remarks, it is chiefly, if not entirely, in the great majority of such cases, as ancillary to the adoption of more efficient curative measures, that we can view it in the light of a therapeutical remedy. But for the induction of anæsthesia, chloroform is a most valuable agent, and one which, for many obvious and cogent reasons, had superseded the use of ether in surgical and obstetric practice. Its use in operative surgery and midwifery is next considered; and a distinguished Fellow of the Society, the late Mr. Liston, is mentioned as the first person in this country who tested the value of anæsthesia in the capital operations of surgery. He hailed with enthusiasm the announcement from America, "that a new light had burst upon surgery, and that on mankind a large boon had been conferred."

The use of chloroform in midwifery has given rise to much discussion, and the author considers, that properly and fully to appreciate its value, its effects must be studied in their relation to the physiology of parturition. Great light, he says, has been thrown upon this latter subject by the researches of Drs. Robert Lee and Marshall Hall,—by the former, in regard to the nervous endowments of the uterus itself, and by the latter, as the expounder of the doctrine of reflex action. In the sequence of effects from the inhalation of chloroform, as the spinal and ganglionic systems, on which the parturient act essentially depends, are the last to come under its dominion, he considers we run no risk of seriously interfering with or arresting their action, if we use common care and ordinary prudence in its administration. In cases of excessive motor action, with a rigid and unyielding condition of the os uteri, passages, and outlet, the advantages arising from the induction of anæsthesia are great. In instrumental midwifery, and in cases of turning, when the patient is nervous, restless, or unmanageable, chloroform presents a valuable auxiliary. The fact, that immunity from pain may be secured without the suspension of intellectual consciousness, ought never to be forgotten in obstetric practice. In conclusion, the author says, that in ordinary and normal labour, as a general rule, he is strongly inclined to the opinion, that anæsthesia is uncalled for; but that there are other cases, preternatural and instrumental, in which its induction is a most desirable procedure, alike to the accoucheur and his patient.

Dr. SUTHERLAND said, that as it was desirable that the fellows of the Society should share their experience with respect to chloroform in the treatment of disease, he would mention that he had employed it in two cases of epilepsy, in which the "aura epileptica" was present, with good effect. In one of these cases the fits were suspended for two years; in the other for not quite so long a period. He had employed it also in

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some cases of insanity in St. Luke's Hospital, in which it acted as a temporary sedative, but not as a curative agent. He had, however, seen three cases of puerperal mania resulting from the use of chloroform administered during pregnancy.

Mr. Barlow had listened with much attention to the communication of Mr. Dunn, who had very ably brought forward a subject which ought to have been discussed in the Society before. It was one not less interesting to the physiologist than the practical surgeon. Though agreeing in many of Mr Dunn's remarks, he could not but observe that the danger which might attend the administration of chloroform had not been touched upon with sufficient emphasis. A great deal had been said, at various times and places, about the fatal cases, and the operators had been blamed for their lamentable results; but he doubted very much, looking calmly and fairly at the attendant circumstances, whether *some* of these deaths would not have happened, however skilfully the agent might have been given. He was not sure that had Dr. Snow himself exhibited the gas, that mortal consequences might not have ensued. The effect of chloroform upon the heart's action was always to be borne in mind Whenever the irritability of that organ was impaired there was more risk in giving it than usual. Who could say that the muscular structure of the heart was healthy in all those unfortunate individuals who had died? The administration of chloroform was clearly perilous, to some extent, wherever fatty degeneration of the heart had far advanced; yet patients would present themselves for surgical operation, and take chloroform, having the organ far-gone in this affection, though the best auscultator might not be able, perhaps, to affirm so. He thought Dr. Sibson's observation as to the amount of blood impregnated with chloroform which the heart receives was of great interest, and should be kept in view when the influence of this poisonous agent—for poisonous it was, when carried to the extreme—upon the heart's action was considered. He was quite aware of the immense relief of pain, and of the great good which had, speaking generally, followed the use of chloroform; and he saw no reason in anything that had occurred to dissuade from its use, so innumerable were the instances in which it had been given, to the loss of anguish, and with perfect safety. Still fatal cases should teach a lesson, and remind us what a tremendous agent we were using. The effects of chloroform upon tetanus had been alluded to. They were, so far as his inquiry went, disuniform. He had himself administered it in one instance: it subdued the spasms for awhile, but gave no permanent relief. Dr. Snow had obligingly communicated to him a case, in which a similar result had followed. But it would not be right to make up our minds too quickly, even as to its palliative effect in tetanus. He (Mr. Barlow) had been indebted to Mr. Paget for knowledge of an instance, in which its influence was so frightful that it would have been death to have persisted in it. M. Roux had once given ether to a tetanic patient, and that distinguished surgeon attributed the rapid death which followed to the effects it occasioned. The whole question of chloroform wanted a full examination upon all sides.

The President said that the Society would feel obliged to Dr. Sutherland if he would furnish some further particulars respecting the cases of puerperal mania which he had mentioned as resulting from the employment of chloroform.

Dr. Sutherland replied that one of these cases occurred in a lady whose epileptic fits had been suspended by chloroform; in the absence of the nurse she had inhaled a great quantity of the agent, and mania was the result. In another case, he had himself administered the agent, the patient being the wife of a medical man; and in the third instance, he had received a letter from the gentleman who had attended the case, in which it was stated that the mania came on after the use of the chloroform.

Dr. Heale objected to the use of chloroform for the purpose of controlling or allaying hysterical paroxysms, since he had observed that chloroform administered for purposes of surgery invariably produced hysterical symptoms, in all in whom there existed the least tendency to that malady. With regard to the effect of chloroform, Dr. Heale felt able to speak with some certainty as to some of its effects on the animal system, having operated, and been present at numerous operations, on various animals under its influence—donkeys, goats, dogs, rabbits, &c. If the carotid artery and jugular vein, or any other large artery and vein, be laid bare, and the end of a wire of gold, of platinum, of copper, or of any other metal, be inserted into each, so as to come in contact, the one with the arterial, and the other with the venous blood, and the free ends of the wires be brought to a galvanometer, so as to complete the circuit, a current of electricity is found to pass along the wires in the direction of the course of the blood in the vessels, and this current is strong in proportion to the active vitality of the animal, it becomes feebler in proportion as the animal becomes powerfully influenced by the chloroform, again increasing in strength as the animal recovers from its effects; if, however, the animal does not recover at the period of death, the current wholly ceases, but returns in a contrary direction as the blood coagulates. A similar reverse current is found if venous and arterial blood are taken out of the body into separate cups and placed in galvanic relation to each other, and this continues as long as the blood is in the act of coagulating. The effects in the living animal can also be shown by passing the current through Snow Harris's air-thermometer. Dr. Heale thought that the quantity of carbon given off from the lungs was the exact co-efficient of the force of decomposition acting through the whole body; that four distinct systems of circuits could be made out of each, of which the circuit through the lungs forms a part; that each is insulated from the rest; and whether they be considered as decomposing cells, and the lungs as the generators of the decomposing force, or the converse, the amount of decomposition as measured by the carbon determined, deposited, or secreted, bears a precise relation to each other, and to that combined in the lungs as a whole. Four such circuits could be distinguished by the chylopoietic, the renal, the spermatic, and the general systemic—and they are each insulated from the rest; the lungs themselves, by the double pleura; the chylopoietic circuit, with its double system of capillaries, by the peritonæum; the renal, by the fibrous investment of the kidneys; the spermatic, by the tunica albuginea and vaginalis; and the general systemic, by the skin and the membranes which insulate the other circuits.

Dr. Sibson said, that although the muscular fibres of the heart were readily paralyzed by the rapid administration of chloroform, yet there was no danger of such an accident in the healthy person, if the agent is administered slowly, and plentifully diluted with air, in the manner pointed out with scientific precision by Dr. Snow. The valuable paper just read has ably stated the effects of chloroform on the cerebral hemispheres and the cerebral ganglia. He considered, however, that sufficient stress had not been laid on the influence of chloroform on the peripheries of the nerves. The local application of prussic acid or chloroform induces local anæsthesia by paralyzing locally the peripheries of the nerves. In like manner, when chloroform is conveyed by the circulation through the system, the agent, being applied everywhere to the peripheries of the nerves,

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produces directly everywhere, so to speak, local anæsthesia of the nervous peripheries. Not only, however, is loss of sensation thus caused, but loss of reflex excitability also, in the same way that when a frog's limb is dipped into a watery solution of opium, reflex excitation is destroyed in that limb before it is destroyed in the opposite limb, to which the poison had been merely conveyed in a more diluted form by the circulation. In viewing the influence of chloroform upon the nervous system as a whole, we must look not only to its direct effect on the cerebrum, and on the universal peripheries of the nerves, but to its direct centric effect also on the spinal marrow, a subject which he had illustrated in his Physiological Address on the Causes which Excite Respiration, published in the recent volume of the Provincial *Transactions*. Volkman and Weber show, that while reflex movements, excited eccentrically, are necessarily intermittent, being speedily at rest and speedily capable of fresh excitation, the direct movements, excited by stimulating the spinal marrow as a centre, are continuous; so long as the spinal marrow is excited the muscular contraction endures. Permanent muscular rigidity, as in tetanus, is invariably caused by the excitation of the spinal marrow; the permanent muscular movements, such as the closure of the sphincters, are under direct spinal control. The muscular rigidity, so usually excited by chloroform during the second degree, is dependent upon the excitation of the spinal marrow by the chloroform, as well as by the withdrawal of the cerebral control from over the spinal marrow.

Dr. Snow said, that if the opinion expressed by Mr Barlow were correct, that chloroform could not be administered without a slight amount of danger, its benefits would be very much diminished. One of the greatest advantages to be derived from its use was to relieve the patient from the dread of an operation, often a greater evil than the physical suffering; but if they were unable to assure the patient that the chloroform could be administered without danger, and if he could only take it at the risk of sudden death, however trifling, his mind would not be free from apprehension. The deaths from chloroform had occurred in the hands of persons who had had little or no experience of its use. He believed that there had been no exception to this. One death had, indeed, happened at the house of a gentleman of great experience; he alluded to Mr. Robinson, the dentist; but that occurrence took place just as the patient was beginning to inhale, and when, according to the evidence, he could have had scarcely any chloroform. He appeared to have fainted, from the state of apprehension he was in, and being the subject of fatty degeneration of the heart and great enlargement of the liver, the syncope was fatal, as it was very liable to be in such a state of disease. In addition to these facts there were strong reasons to show that accidents need not be apprehended from chloroform when used with due care by medical men who had had sufficient experience. In the hands of such persons, the effects of this agent could be induced with great uniformity. Every patient who consented to inhale could be made insensible in three or four minutes, with a quantity of chloroform not varying more than the size of the patient. For instance, from thirty or forty minims to a drachm sufficed to cause insensibility in the adult, in all cases. In most of the instances, on the contrary, in which accidents had happened, there were distinct proofs of a want of uniformity and regularity in the way of exhibiting it. In a death, for instance, which occurred some two years ago in Westminster, half an ounce of chloroform was used on a handkerchief without the patient being rendered insensible. More chloroform was sent for from the druggist's, and on the next occasion, before half an ounce had been used the patient unfortunately lost his life—a result which consequently could not be attributed to any peculiarity of constitution. In the case of Mr. Cock's patient at Guy's Hospital, they failed to make the man insensible with the inhaler they usually employed; a handkerchief was then used, and sudden death was unhappily the result. But insensibility ought to have been induced in the first instance with the inhaler, and the more easier if there had been any unusual susceptibility to the effects of chloroform. Again, in a case that happened the week before last in the Mile-end workhouse, it was related that half a drachm was given to the patient without producing any effect, and on a second half drachm being exhibited, he died suddenly without any preliminary symptoms. It was evident, however, that the first half drachm would have produced some effects if properly exhibited; and here again there was proof of irregularity and want of skill, as there was, indeed, in the circumstances related of nearly every case in which accident had happened. With respect to the physiological effects of chloroform, he was of opinion that they could not be fully explained without taking into account its local action on the nerves as well as on the nervous centres. He had in this way been in the habit, almost from its introduction, of explaining the want of uniformity between the immunity from pain or loss of common sensibility, and the other symptoms connected with the degree of coma which was induced.

Dr. Copland, after speaking of the great interest of the paper, said he was willing to admit that injury had resulted from the injudicious use of the chloroform, but there did not appear to have always been a due recognition of the state of the patient to whom it was administered. He thought we should not employ it in cases of organic disease of the heart, nor in cases of neuralgia, where there was any reason to suspect that there was disease of the nervous centres. He was surprised that no notice had been taken of the effects of chloroform on the lungs themselves. The gist of the first paper was to show the usefulness of this agent in some spasmodic affections of the air-passages. In some cases, however, it might be injurious. In some cases in which chloroform had been used and the patients had died, symptoms of congestive pneumonia had presented themselves, which were regarded as the effects of chloroform rather than of the operation to which the patients had been subjected. In some cases in which he had been consulted respecting the inhalation of chloroform in operations upon the teeth, he had generally objected to it; for he had seen two cases of congestive pneumonia from that cause, in one of which cases the patient did not fully recover from the disease under six months. He thought, then, it was most desirable not to use chloroform in cases where there was was a tendency to lung disease, and this caution held especially good in cases of early phthisis, in which there was usually a tendency to congestive inflammation. He could not help making these remarks, though he cordially subscribed to the excellence of the paper under discussion.

At the conclusion of the debate, the President invited Mr. Spencer Wells and Mr Dunn to make any remarks they might wish to offer before the meeting broke up. Mr. Wells was not present, and

Mr. Dunn rose. He said he had no wish to trespass upon the time and attention of the meeting, but one thing he must say. It did appear to him that the time had arrived when the subject of chloroform ought to be brought fairly and fully before this Society, unquestionably the first medical and chirurgical tribunal in the kingdom. Under this conviction, and in furtherance of that object, it was, that he had presumed to make such an attempt; and to him it was a source both of satisfaction and of pleasure that such an inte-

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resting discussion had arisen. No one could be more fully sensible than himself, that he was at that moment surrounded on all sides by gentlemen infinitely better qualified, from mental endowments, professional knowledge, and practical experience, to accomplish what he had attempted far more ably and with greater effect than he had done. He regretted the time for the discussion had been so limited, for the subject was one of great practical importance, and an authoritative expression from that Society on the value of chloroform was alike demanded and wanted.

WESTERN MEDICAL AND SURGICAL SOCIETY.

Anniversary Meeting.

The fifth anniversary meeting of this Society was held in the room, Cadogan-gardens, Sloane-street; Dr. Robert Lee, F.R.S., in the chair. There was a large attendance of members and visitors, among which latter were the Presidents of the London Medical and Harveian Societies. The Report of the Council showed a prosperous condition of the Society, the number of members being larger than at any previous period of its existence. 165 new volumes had been added during the past year to the library of the Society, which now comprised above 700 volumes, a catalogue of which is in preparation. It was announced that the meetings of the Society would in future be held on alternate Friday evenings, from October to May, and that an additional secretary would be appointed. Thanks having been voted to the President and officers during the past year,

Dr. R. Lee rose, and after congratulating the Society on its progress and success, and dwelling on the advantages of similar associations, addressed his hearers in the following terms:—

Gentlemen,—For the honour you have conferred upon me in electing me President of this Society, I entreat you to accept of my warmest and most grateful thanks. Your first president was an eminent physician; your second a very distinguished surgeon; the third, who has now the honour of addressing you, was chosen their successor because he had zealously devoted a great part of his life to the study, the practice, and the teaching of midwifery. These being the grounds of your choice, and the greater number of you being extensively engaged in the same department of practice, perhaps you will allow me to offer a few general remarks on the progress of midwifery since the commencement of the present century, and its condition at the present time. The sound principles of English midwifery established by the labours of the Chamberlains, Giffard, Chapman, Smellie, Hunter, and other distinguished men, were set forth in the most perspicuous manner by Dr. Denman, in 1788, and were reduced to aphorisms or fixed maxims, which many students and practitioners committed to memory. The rules laid down by Dr. Denman so explicitly, for the treatment of all the varieties of human parturition, natural, difficult, preternatural, and complicated, are those which still guide the great body of English accoucheurs with safety at the present time. None of these rules have undergone any essential modification, and all the reports of lying-in hospitals, public institutions, and private practice, since published, have only tended to fortify these precepts. The induction of premature labour, first proposed in 1756, and which will ever be considered one of the greatest triumphs of English midwifery, (equal, if not superior, in importance, to the invention of the forceps—also of English origin,) had received but little notice at the time Dr. Denman wrote; but which the greatest authority he bore testimony to its safety, efficacy, and morality, and pointed out, with greater precision than had been done before, the circumstances which ought to guide us in the performance of the operation. The induction of premature labour has since been had recourse to in a great number of cases, and its safety and efficacy completely proved, not only in the slighter, but also in the highest degree of distortion of the pelvis, and thereby the danger of craniotomy and the necessity for the Cæsarian operation have been averted. But the induction of premature labour has been found applicable not only to all the forms and degrees of distortion, but to ovarian, uterine, and bony cysts and tumours, obstructing delivery; to cicatrices of the vagina, malignant diseases of the os and cervix uteri; organic diseases of the heart and lungs; dropsy of the amnion, and general dropsy; renal and vesical diseases; mania during pregnancy; and especially in cases where life is endangered by obstinate vomiting during gestation. "A knowledge of the anatomy and physiology of the gravid uterus," says one of our highest authorities, "is the foundation of midwifery, the sole security of the accoucheur amidst all the dangers of practice, and his truest guide in every difficult situation: every rule of practice, every precept, must be derived from this source." Great additions have been made to the knowledge both of the gravid and unimpregnated uterine systems, during the last thirty years. The human ovum in the ovarium, before impregnation, has been seen and demonstrated, and unimpregnated ova have been proved to exist in the Graafian vesicles of all animals. The changes which take place in the human ovaria every month have been observed, and the phenomena of menstruation explained. The changes also in the human ovaria after conception, and the structure of the corpus luteum, have been determined. Great light has also been thrown on the physiology and pathology of the human ovum, both in the earlier and the latter months. The double circulation in the placenta, as first described by W. Hunter, has been experimentally decided to exist, and the course of the maternal blood through the decidual membrane and decidual cavity has been accurately marked out. The ganglionic nervous structures of the uterus, on which its peculiar sensibility, contractile powers, and innumerable sympathies, depend, have been displayed—analogous to nervous structures, which have also been shown to cover the surface, and pervade the walls of the heart. The diagnosis of pregnancy within the last quarter of a century has been rendered almost perfect, by the employment of auscultation and other means. Within the same period, all the organic diseases of the uterine organs, all the malignant and non-malignant alterations of structure, all the varieties of tumours and polypi, have been subjected to the most elaborate anatomical research; and the varied appearances they exhibit have been represented by the most distinguished artists. It is now universally admitted that important additions have recently been made to our knowledge of puerperal diseases. From this brief survey of the progress of midwifery since the close of the last century, you will perceive that the science has been steadily and rapidly advancing. The result of all this has been, that the importance of midwifery, though tardily and reluctantly, is now generally acknowledged; and those who practise it occupy a much higher rank in the profession than they did thirty years ago. It is therefore painful in the highest degree to be compelled to allude to the efforts which are now incessantly being made by certain false teachers, who have crept into some of our public schools and universities, to debase uterine pathology by empirical proceedings, and to pervert and corrupt the sound principles of English midwifery. To you, gentlemen, the greater number of whom I know personally to be practitioners of great experience, it is unnecessary for me to denounce the

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indiscriminate employment of the speculum, and the application of the actual and potential cautery to the os and cervix uteri—disorganizing their structures; to denounce the folly and absurdity of rubbing the lining membrane of the virgin uterus with lunar caustic, to excite what has been termed a menstrual effort in cases of amenorrhœa and chlorosis: to denounce the practice of passing up unguentum hydrargyri fortius, with a catheter into the cavity of the uterus, to dissolve fibro-cartilaginous tumours, which are as hard as brickbats, and nearly as insoluble; to condemn as mischievous and senseless all the strange metallic rings and prongs with hidden springs, and all the impaling uterine machines of every description, constructed for the purpose of relieving imaginary retroversions or backslidings of the womb; to deprecate the practice of slitting and cutting open the os and cervix uteri in all directions with hysterotomes, for the cure of sterility. Lastly, it is unnecessary for me to denounce to you as an outrage against science and humanity, and substituting for the induction of premature labour in cases of distortion, the employment of the long forceps—the operation of turning when women are stupefied by chloroform—and even the Cæsarian section, which Mauriceau declares cannot be performed, "sans un trop grand excès d'inhumanité, de cruauté et de barbarie." Dr. Lee then drew attention to the resolution of the College of Surgeons, passed on the 24th of March,—"That the council of this college are prepared to form and superintend a board of examiners in midwifery, or to co-operate with the Royal College of Physicians in the institution of examinations for testing the qualifications of practitioners in midwifery." If this resolution, as he said, be duly carried into effect, the most important consequences cannot fail to result, not only to the public at large, whose interests are deeply involved in this measure, but to the whole medical profession. The President sat down amidst loud applause.

The following gentlemen were then elected to fill the various offices during the ensuing year:—*President:* Dr. R. Lee, F.R.S.—*Vice-Presidents:* Dr. Aldis, Mr. Barnes, Dr. Cahill, Mr. Godrich.—*Treasurer:* Dr. Woolley.—*Council:* Dr. Barclay, Mr. Batten, Mr. Bullock, Dr. Christian, Mr. D. Davies, Mr Haden, Mr. Martyn, Mr. Sampson, Dr. Simpson, Dr. Traquair, Mr. Webb.—*Secretaries:* Dr. Seaton, Mr. Keen.—*Auditors:* Mr. Meates, Mr. Whitmore.

The proceedings terminated by a conversazione. In the course of the evening, Mr. Toynbee gave a demonstration of his recent researches into the structure of the membrana tympani, illustrated by diagrams and preparations.

EPIDEMIOLOGICAL SOCIETY.

MONDAY, MAY 5, 1851.

THE ordinary meeting of this Society was held this day, at the House of the Royal Medical and Chirurgical Society. Dr. BABINGTON, the President, in the chair.

At the usual period, the President announced that any gentleman who had been prevented from stating his views on the nature of yellow fever, at a former meeting, was now at liberty to do so, the discussion having been adjourned for that purpose.

Mr. P. H. HOLLAND, M.R.C.S., rose, and maintained at some length the views taken by Mr. Baker and others, who had spoken at the former meeting, as to the non-contagiousness of yellow fever.

Dr. M'WILLIAM, in reply to the various speakers who had assailed the conclusions at which he had arrived regarding the importation of yellow fever into Brazil, and the subsequent diffusion of that disease over the sea-bound provinces of that empire, by means of contagious propagation, begged to inform those gentlemen who had based an objection to his views on the ground that there was no proof of yellow fever having prevailed, either at New Orleans or Havana, at the time the vessel alleged to have imported the disease left those parts, that as regarded slave-ships, false papers were the rule, and not the exception. A very slight acquaintance, however, with tropical disease would have suggested the fact, that prevalence of yellow fever, at either of these parts, to such an extent as to indicate foul bills, was by no means indispensable to the point for which Dr. M'William contended. Dr. M'William in a very temperate and able manner, defended the views he had taken in the paper read by him, and, in speaking of the laws of quarantine, concluded by saying, that he hoped, if ever a quarantine congress did take place it would be composed of men whose object was not merely a crusade against quarantine. He trusted that those selected by the different countries for this high duty would be men who, from their standing, education, habits, experience, and he would add freedom from political trammelling, would be enabled to produce a Report worthy of the occasion, and wholly irrespective of the political, commercial, or other views of the countries they respectively represented.

At the conclusion of Dr. M'William's reply he was warmly applauded, and a vote of thanks was awarded him for his excellent paper on yellow fever.

The PRESIDENT stated, that in future no discussion on one subject could be permitted beyond the second night, as it interfered with the reading of papers.

Dr. SNOW, at a quarter to ten, commenced reading his paper "On the Mode of Propagation of Cholera." The further reading of the paper was deferred, at the request of the meeting, till the 2nd of June—when

Mr. R. H. COOKE will also read his paper "On the Epidemic Mental Diseases of Children."

The meeting was well attended.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, et dissectionum historias, tum aliorum proprias, collectas inter se inter-que comparare.—MORGAGNI. *De Sed. et caus., Morb.* lib. 14. Præmium.

ST. BARTHOLOMEW'S HOSPITAL.

Thyroid Hernia: Death; autopsy.

(Under the care of Mr. STANLEY.)

IT has been maintained that diagnosis is both the most essential and difficult part in the practice of medicine and surgery. Many of our professional brethren will doubtless agree that this assertion is founded on truth, and will congratulate themselves that so many additional means have in modern times been devised for rendering the diagnosis of the disease more accurate and satisfactory. The stethescope, chemical analysis, the microscope, &c., are rendering services which come daily under observation; but there are still certain affections which elude our most careful investigations. In medicine, nervous complaints might be named among these, and in surgery the diagnosis of tumours, of malignant disease, and certain forms of hernia.

Inguinal, femoral, and umbilical hernia present very distinct and well-defined characters, yet these affections

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may sometimes remain doubtful, and even be mistaken one for the other. Indeed, we were lately told by an accomplished hospital surgeon, that a patient was a short time ago sent to him with a varicose state of the vena saphena near the groin, which vascular derangement had all the characters of femoral hernia; so much so, that by the advice of a very talented surgeon, a truss had been worn for it. Ventral, cystic, and vaginal hernia are still more difficult to recognise; and we may lastly say, that the existence of thyroid hernia can hardly be observed in the living subject. Nor is this latter circumstance to be wondered at, as it is stated by an eminent author on hernia, that it is hardly possible that a tumour can form on the thigh. Mr. Lawrence expresses himself as follows in speaking of thyroid hernia:—"The pectinæus, the long and middle head of the triceps, and the gracilis, so completely close the space into which the sac protrudes, that they must by their pressure prevent it from increasing to any great bulk." "These circumstances of anatomical position would undoubtedly lead us to suppose that the complaint could never be recognised during life. Yet we are informed by Garengeot, that Arnaud had reduced several obturator herniæ, and kept them up by bandages; that he himself had seen and reduced two such ruptures in the living subject, and that two other instances had been communicated to the Academy. The careful perusal of these facts has not satisfied me that they were obturator herniæ."

It is, then, quite apparent that a protrusion of bowel or omentum through the obturator foramen is not only extremely difficult to diagnose, but that such an occurrence is very rare. The case lately under the care of Mr. Stanley was surrounded by much obscurity, as the groin presented appearances which might in some degree account for the symptoms. In offering the subjoined report, we have no doubt that it will add one more valuable fact regarding the history of unusual abdominal displacements.

Eliza T——, aged fifty years, was admitted April 3, 1851, under the care of Mr. Stanley. The patient is a widow, has borne several children, and says that she never suffered from rupture until about four weeks since, when one evening, whilst coughing, she found a swelling in the left groin, the tumour being then larger than it is at present. She had suffered from complete obstruction for the last twenty-five days, with the exception of a few scybala which she passed four days before admission. Vomiting has been continued for the last week.

On examination, an ill-defined swelling was noticed in the left groin, communicating to the hand the feeling of a distended vein. The tumour was nodulated; pressure seemed to diminish its bulk; it was situated more outwards than a femoral hernia usually is, and the artery was seen pulsating on its external side. The swelling, as well as the neighbouring parts of the abdomen, were painful; the countenance anxious; the tongue slightly furred, and very red at the tip. The vomiting, which, as above stated, commenced a week before admission, was still affecting her; it had become stercoraceous and very offensive.

Mr. Stanley was undecided as to whether the above described tumour was really a hernia, but thought it right to investigate its nature by operation. On making an incision over the swelling a substance much resembling a piece of fat protruded; this was soon found to be omentum, which, however, was evidently not strangulated, as more of it could easily be drawn down. Mr. Stanley now broke down the adhesions, but some difficulty was still found in returning the herniated portion of omentum, the latter being now found to have passed through a circular opening of fascia lata, and to lie close to the skin. A further incision was then made upwards and the portion of omentum, after a little trouble, returned into the abdomen. No chloroform had been administered; opium pills were ordered and the patient put to bed. On the next day it was found that she had had very little rest; she expressed herself, however, as much relieved; there had been neither vomiting nor action from the bowels, merely soreness of the abdomen being complained of. As no alvine evacuations were taking place, enemata of soft soap and afterwards of infusion of senna and extract of colocynth were administered, but without success. Sulphate of magnesia in mint-water was taken by the mouth with no better results; the patient becoming, meanwhile very weak, she was supported by brandy, &c; but the stercoraceous vomiting recurred, and she died on the sixth day after the operation.

The post-mortem examination was conducted by Mr. Stanley, as the case was of a very obscure character, and had created an unusual amount of interest. The abdomen being carefully opened, the first object which offered itself to view was the small intestine enormously distended and congested, in contrast with the transverse colon lying across the cavity in a contracted state. The omentum was thin, and generally adherent to the lower portion of the abdominal walls, and a small portion of it had remained firmly fixed in the vicinity of the wound made during the operation. The aperture which had given passage to this portion of the omentum under Poupart's ligament was now dissected and found to be circumstanced as had been thought at the time of the operation, the external wound being in a semi-gangrenous condition.

On gently drawing from the lumbar region the distended coils of ileum, the descending colon was noticed to lie on the quadratus lumborum, and to be contracted to a quarter of its usual size, not appearing much larger than a good-sized quill. Mr. Stanley observed, at this stage of the autopsy, that he would here have met with a very unpleasant disappointment had he attempted Amussat's operation of making an artificial anus in the lumbar region, as the large intestine was so diminished, that it would have been extremely difficult to find it, and even when found it was clear that an incision into the gut would have been found of no avail.

The distended ileum was now carefully followed downwards towards the pubis, and when the pelvic cavity was brought into view, the rest of the small intestine was found lying both in that cavity and the right iliac fossa, looking very much like the bowels of an infant; indeed, it was so thoroughly contracted that the calibre did not look larger than that of the appendix vermiformis. Mr. Stanley now made gentle traction upon the ileum, which seemed to have formed adhesions, or to be strangulated somewhere about the pubis, and by this drawing of the bowel, a small portion seemed to give way, as faculent matter, of the consistence of cream, and of a light yellow colour, began to escape. The suspicion that some portion of intestine had been forced through the thyroid foramen now began to be entertained, and it was soon found, by a careful dissection in front of the thigh over and through the pectineus muscle, that a peritoneal sac had protruded through the thyroid foramen. This sac was composed of peritonæum and omentum, and there was so much of the latter structure that the pouch in which the intestine was lodged, looked as if it were entirely omental. The intestine, rather of a dark colour, was a strangulated continuation of the above-mentioned distended ileum.

This was, therefore, a case of thyroid hernia, an affection which is extremely difficult to diagnose, especially when but a small portion of intestine was protruded Mr. Stanley stated, (and his opinion was corroborated by his colleagues present at the autopsy,) that

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a case of thyroid hernia had not before occurred at this hospital, at least within his knowledge. The strangulated intestine was not disturbed, and by taking the head of the femur out of the cotyloid cavity, dividing the pubis, and separating the sacro-iliac synchondrosis, the parts were carefully removed, and will form a very valuable preparation for the museum of the hospital.

Many years have not elapsed since obturator hernia has been carefully observed and described; for Mr. Lawrence states, in his work on Ruptures, that in Garengeot's cases mentioned above, (Mémoires de l'Académie de Chirurgie,) we have the first publication in which the existence of obturator hernia was clearly proved. The records of surgery contain very few cases of this kind of hernia, the reason why this peculiar displacement so rarely occurs, being, without doubt, the anatomical disposition of the parts concerned. It should however, not be forgotten, that many patients die of obstruction without being inspected, and though such cases are generally thought to depend on internal strangulation, many *may* have sunk under the effects of strangulated thyroid hernia. The most remarkable and instructive case bearing upon this question is the one related by Mr. Hilton, in the *Medico-Chirurgical Transactions*, vol. xxxi., p. 326. In this instance, the abdomen was opened to seek for an internal strangulation, as obstruction had existed for a considerable time, but instead of invagination, or intussusception, strangulation in the obturator foramen was discovered, Mr. Hilton had suspected that the obstruction lay in the small intestine, "as the abdomen was not much distended, the colon retaining nearly three pints of injection without distress, the vomiting having come on so early in the attack, and the secretion of the urine being very scanty;" but the nature of the impediment was of course surrounded by obscurity. That Mr. Lawrence's opinion, which we quoted above, is quite correct, is clearly borne out by Mr. Hilton's case, for we find the latter saying, p. 332, "Before opening the abdomen I thoroughly examined her in reference to any hernial tumour, without finding any evidence of it." Mr. Hilton adds, further, in speaking of the obturator hernia which was found, "There were certainly no special or peculiar symptoms portraying its existence."

Mr. Hilton draws from the circumstances of his case a therapeutical inference which should not be forgotten; he says as to the administration of metallic mercury, "it is possible that the use of a considerable quantity might have been of service, from its weight sinking into the pelvis below the level of the obturator foramen; and by thus dragging upon the intestine it might have displaced it from its incarcerated position; so that I think in a like case, *provided it could be diagnosticated*, metallic mercury ought to be had recourse to."

Mr. Smith (of Manchester) has related a case of nearly the same description as the above; this patient died twenty-one days after the last fæcal evacuation, without any symptoms of obturator hernia. On a post-mortem examination, a knuckle of ileum in a sphacelated condition, and a peritonæal sac containing a little fluid, protruded at the notch for the passage of the obturator vessels. Mr. Lawrence states (*op. cit.*) that a case has been minutely described by Cloquet, (*Journal de Corvisart,*) in which a thyroideal entero-epiplocele caused death. It produced no *visible external swelling*; the tumour was about the size of a small hen's egg, and contained sphacelated intestine and omentum. It was covered by the pectineus and abductor longus, and rested on the vessels and nerve. Cloquet observes, that these ruptures are more common than has been generally supposed, and more frequent in *women* than in men. The patients of Mr. Stanley, Mr. Hilton, and Mr. Smith, (of Manchester,) were women.

Instances of accidental post mortem discovery of thyroid hernia are mentioned by various authors. Sir Astley Cooper states, in his great work on Hernia—"The only example which I have seen of this disease is in the collection of preparations at St. Thomas's Hospital, and in this case the hernial sac was so small that I doubted the propriety of including it in my plates. The hernia existed in a male subject, and was accidentally observed in making a preparation of an inguinal hernia on the same side. The size of the hernial sac within the thigh did not exceed that of a nutmeg; the obturator artery and nerve were situated behind the neck of the sac, and a little to its inner side." The museum of St. Thomas's Hospital possesses, besides the preparation mentioned by Sir Astley, a second one, illustrating obturator hernia, under No. 1353; but there is, unfortunately, no history of the case. Mr. South remarks, in Chelius's Surgery, that the only two examples he knew of thyroid hernia, were one from a male subject in St. Thomas's Hospital, and another in the collection of the Royal College of Surgeons. We found the latter under Series xxv. Sect. iv., No. 1359, with the following remarks:—"Part of a pelvis, with a strangulated hernia of a small portion of ileum through the foramen ovale, on the left side. The sac is opened anteriorly, it protrudes straight through the foramen. (From the Museum of John Howship, Esq.)"

The last example of thyroid hernia to which we shall allude is one which was operated on at St. George's Hospital; the preparation is arranged under *O. b.* 18. The patient, aged sixty-seven, was admitted with well-marked symptoms of strangulated hernia. She stated that she had been subject to a rupture in the groin for the last seven years, for which she had always worn a truss, and that the hernia had come down behind the truss three days before admission. She had succeeded in reducing a part of it herself, and a surgeon had returned the other on the following morning, the whole tumour having been the size of a pigeon's egg. At the time of her admission the various regions through which hernia occur were carefully examined. No tumour was, however, found in any one of them; but on the following day a slight enlargement was obscurely felt in the left groin. As the symptoms had not been in the least relieved, Mr. Tatum cut down upon this enlargement, which appeared to be of the size of a marble and perfectly flaccid. The ring was of large size, and easily admitted the index-finger. The symptoms of strangulation were not diminished, and the patient died exhausted two days after admission.

On a post-mortem examination it was found that the slight tumour in the groin was an old hernial sac, which was perfectly empty and flaccid, the opening of communication between the sac and the peritonæum being about the size of a common director. On further search an *obturator hernia* was found on the left side, the nerve being situated on the outer side of the sac, and the neck of the latter partly encircled by a large branch of the artery passing at its upper part. The whole of the sac was completely covered by the obturator externus muscle, being situated between the latter and the obturator ligament. In the sac was contained a portion of the diameter of the small intestine, which was of a dark livid colour, and strangulated at the time of the post-mortem examination. The portion of intestine above the strangulated part was very much dilated, and filled with fluid fæces; whilst all the portion below it was empty and flaccid. There was no lymph in the peritonæum, but all the intestines were much congested.

The above account is extracted from the Museum Catalogue of St. George's Hospital. The preparation will be found a very valuable and perfect specimen of obturator hernia.

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ST. THOMAS'S HOSPITAL.

Lacerated Wound of the Thigh and Leg; Subsequent Ulceration of the Popliteal Artery; Hæmorrhage; Transfusion; Deligation of the Femoral Artery; Amputation; Second Transfusion. Death. Autopsy.

(Under the care of Mr. SIMON.)

¶ It is not often that an opportunity is afforded to watch the effects of transfusion upon the human subject. Our readers will therefore understand that we felt extremely interested in a case where Mr. Simon resorted to this operation. There are several examples of injection of blood into the veins of females on the point of expiring from hæmorrhage after delivery, the experiments of Dr. Blundell (*Medico-Chirurgical Transactions*) having contributed in no small degree to create confidence in the minds of surgeons; but transfusion has been less frequently used to combat the effects of hæmorrhage in male patients, and we thus feel much pleasure in giving publicity to the case lately under the care of Mr. Simon, where every exertion was made on the part of the surgeon and his pupils to counteract the fatal result of extensive loss of blood.

Our readers are aware that transfusion was practised for the first time upon man by Denis and Emmeret, in France, (1666;) in 1667 Lower and King operated in the same manner, and their example was followed in Italy, in 1668, by Riva and Manfredi. Denis and Emmeret's operation was condemned by the Supreme Court, (Chatelet,) and transfusion interdicted, until the faculty should approve of the procedure; but this approval was never given, as several fatal cases had occurred. Among these may be mentioned that of a lunatic, who was operated upon three different times, to cure his mental derangement; at the third transfusion he cried out "Stop! I'm choking!" and died instantaneously.

It appears that Drs. Waller and Doubleday thus succeeded, in three cases, in saving lying-in women from imminent death by hæmorrhage; and several instances have since been recorded, among which is a case of Mr. Green, who, by means of transfusion, revived a man on the point of dying from traumatic hæmorrhage. Among the physiologists who have declared themselves in favour of transfusion is Majendie. We should, however, observe, that Dieffenbach looked upon the operation as capable of causing instantaneous death. A case of transfusion lately occurred at the Hôpital St. Louis, in Paris, under the care of M. Nélaton; the danger was of a pressing description, and in this instance, as well as in the case we are going to relate, the blood was generously given by a dresser, and the immediate effects were very satisfactory. The case was one of uterine hæmorrhage; and though the patient died of metro-peritonitis a few days after the operation, it proves that transfusion may, when used under certain circumstances, be of immense benefit.

L'Union Médicale lately mentioned another case, published in the Spanish medical papers, in which a young woman, aged twenty-three, six months advanced in pregnancy, suffered from severe hæmorrhage, from bursting the vena saphena during a violent effort unconnected with parturition. She became so weak that Dr. Cazo Sacristan injected six ounces of blood at the bend of the elbow. Abortion took place twelve hours after the operation, and the patient recovered in a very short time. The last case is that of Mr. Masfen, who, in this country, injected twelve ounces of blood, three different times, in a case of uterine hæmorrhage. No sensible effects were noticed from the first two operations, but the patient revived on the third, and finally regained her health and strength. We now proceed to give a few details of Mr. Simon's case.

The patient was an engine-driver, about forty years of age, who met with an accident by which he suffered a severe lacerated wound of the thigh; the soft parts were, on the outer side of the limb, very much disorganised, but there was no fracture, and no vessel of importance seemed to have been wounded. He was admitted March 6, 1851, into Abraham's ward, under the care of Mr. Simon. As the man was in tolerable health, and some hope of active reparative efforts might be anticipated, Mr. Simon resolved to do his best for saving the leg. The patient was well nourished and supported by stimuli, when suppuration begun; several abscesses, however, now formed, and though these were opened gradually as they appeared, extensive sinuses formed in the thigh and leg; erysipelas attacked the limb, diffuse suppuration of the cellular tissue took place, and the mischief was so great, that Mr. Simon suspected the knee-joint was involved in the destructive process. The discharge continued for several weeks, sloughing of the areolar tissue and fascia took place in several points, and the purulent matter discharged was extremely offensive.

This state of things naturally weakened the patient very much; he was allowed a good diet and sufficiency of stimulants, which acted so favourably that some improvement took place a few days previous to the series of events which we are going to relate. At this period two sinuses were discharging rather profusely; one opened on the internal part of the thigh a little above the knee, the other on the outer side of the calf of the leg. On the 9th of April, being about a month after admission, the patient, who had considerably lost in flesh and strength, called to the nurse, saying that he was bleeding. Assistance was soon procured, and when the dresser reached the ward the patient was found in a pool of blood. Compression was immediately applied to the femoral artery in the groin; this measure commanded the hæmorrhage; and when Mr. Simon arrived he found the patient very weak—in fact, almost expiring. The only means of recalling the vital spark, on the point of being finally extinguished, was evidently transfusion, and to this extreme means Mr. Simon had at once recourse, the pressure being at the same time continued. Inquiries were made of the students assembled as to who would part with a few ounces of blood. Mr. Charles Chaldecott having, to his great credit, volunteered, a vein was opened in this gentleman's arm, and sixteen ounces of blood were injected into the dying man's circulating system, through a delicate tube placed in one of the veins at the bend of the elbow.

Evident faintness was now the share of Mr. Chaldecott on the one side, renewed life being instilled into the patient on the other. The improvement was most marked and very satisfactory, both to Mr. Simon who had suggested the transfusion, and to Mr. Chaldecott, who had generously lent himself to this useful proceeding. The compression upon the femoral artery had been continued during this operation, and the patient having now revived to a great extent, complained very much of the pressure made by the fingers. Mr. Simon, therefore resolved to tie the femoral artery in the groin, with the intention of removing the leg as soon as the patient had recovered sufficient strength to bear the shock of the operation. Indeed, amputation had been contemplated for some time past, and had only been postponed on account of the weak state of the patient.

It was naturally suspected that either some large branch of the femoral artery or the popliteal had given way. Mr. Simon tied the femoral artery almost in the groin two hours after the transfusion, hardly a few drops of blood being lost during the operation. Stimulants in the shape of wine, brandy, and strong beef-tea were now plentifully administered, and the patient rallied to such an extent that Mr. Simon amputated the

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thigh a little below the ligature two days after the first occurrence of hæmorrhage. In order that the blood lost should be very small in amount, Mr. Simon directed his two dressers to compress the soft parts and flaps with both hands on either side of the bone, and this pressure being effectually carried out until all the vessels were tied, the amount of vital fluid lost was quite trifling. The operation was performed in the ward, the patient having previously been placed under the influence of chloroform.

Some hesitation might have been felt as to the use of the latter agent, viewing the very weak state of the patient; but Mr. Simon considered that it was all-important to protect the poor man from the shock of the operation, (which shock might in his enfeebled condition be immediately fatal,) in spite of the risk which might attend the use of the anæsthetic agent. The immediate result of the amputation proved that the administration of chloroform acted beneficially, the patient recovered well from its effects, and the shock of the operation had been avoided. The limb was carefully examined and found in a highly disorganized state, extensive abscesses and sinuses having undermined and destroyed the soft parts in different directions. Search was principally made for the source of the hæmorrhage, and after a complete dissection of the parts, it was found that the anterior wall of the popliteal artery had given way to the ulcerating process, and that from this vessel the original considerable loss of blood had taken place. This circumstance will be an additional proof of the power of resistance with which arteries are endowed, for the vessel was completely surrounded by suppurating parts; and it likewise shows that arteries will at last give way, and the hæmorrhage create a very perplexing complication.

Very close watch was kept by the pupils of the hospital, who relieved each other by the bed-side; and an abundance of stimulants was given to the patient. Though very weak, his state held out some hope of recovery; and as transfusion had already, as it were, snatched him from the grave, Mr. Simon had made preparations for a renewed operation of the kind, should it be found necessary, after the amputation. The patient went on pretty favourably until Sunday, the 13th, being five days after the removal of the limb, when extreme weakness came on; and as dissolution seemed at hand, Mr. Simon attempted to ward off the danger by a second transfusion, though feeling very doubtful about the result.

The blood was taken first from a labourer attached to the hospital, but it coagulated so instantaneously that injection was impossible. In this dilemma, Mr. Complin, one of the dressers, very kindly offered his services, and about ten ounces of blood, drawn from a vein at the bend of the elbow, were injected into the patient's left arm, (the right had previously been operated upon.) The operation was performed in the same manner as in the first instance, and though the transfusion seemed to act favourably for a little while, the patient's powers were so completely exhausted that he expired in the evening of the next day, about seventeen hours after the second transfusion, stimulants having been bountifully given during the time.

The post-mortem examination showed that there had been extensive pneumonia of a low form, the lungs breaking under slight pressure of the fingers. No other pathological alteration was observed, anæmia being, however, very general. The extremity of the femoral artery, which had been tied, was filled with a firm fibrinous plug,—this sound state of the vessel showing that Mr. Simon might have continued, in case of hæmorrhage from the artery, to tie it higher up, as was his intention.

When reviewing the facts of this case, it should be remembered that the patient had been greatly enfeebled by long and profuse suppuration; and that the transfusion of blood would probably have answered Mr. Simon's purpose, had the man's condition not been so very weak. As matters stood, it was impossible to attempt anything which offered more chances of success than transfusion.

CHARING-CROSS HOSPITAL.

Aneurism of the Femoral Artery in the Groin; Spontaneous Occlusion; Gangrene of the Leg; Death; Autopsy.

(Under the care of Mr. Avery.

Spontaneous cure of aneurism has at all times been a very interesting, and hitherto not quite explained, surgical fact; we have, therefore, no doubt that a case bearing upon this subject will be perused with a certain amount of benefit. Nor is it very common that an opportunity should be afforded of examining the parts soon after such a natural recovery has taken place; this, however, was the case in the instance which we have to put upon record.

Authors have generally admitted various ways in which aneurisms may cease to pulsate, and become solid without surgical interference. 1. Pressure on the cardiac side of the sac, either by the aneurism itself, or a tumour of a different nature. 2. Occlusion of the aperture of communication by coagulation. 3. Inflammation and gangrene of the cyst. 4. The aneurism becoming diffuse. 5. Obliteration of the artery on the distal aspect. These are the different modes enumerated by Professor Muller, in his "Principles of Surgery;" to these we would add—7. Certain circumstances which must have some influence in spontaneous cure—viz., an increased plasticity of the blood, and a less active circulation from whatever cause.

Mr. Porter states, in his work on Aneurism, that the cases of natural recovery which he has had an opportunity of seeing, occurred by means which are surrounded with great obscurity. Still it might be inferred that such cures must, to a certain extent, have been the result of one of the above-mentioned changes. We find three such cases mentioned by Mr. Porter. In the first, the aneurism had caused the absorption of the sternum, and seemed ready to burst; the pulsation, however, without any appreciable cause, ceased, and the patient recovered. The second refers to a subclavian aneurism, which pulsated strongly. Several consultations were held upon the propriety of tying the arteria innominata, but whilst the operation was being delayed, the tumour lost its pulsations, the clots became consolidated, and the disease disappeared. The third case is one in which Mr. Porter attempted to pass a ligature around the innominata for subclavian aneurism; the innominata artery was in too diseased a condition, and could not be tied; but the patient soon afterwards recovered without the aid of surgery. It is very probable that in these cases the sac became solid by the occlusion of the artery on the cardiac side.

Unfortunately spontaneous cure is very rare, and surgeons have for the most part to trust to deligation of the artery or pressure. In the case before us, as will be seen by the sequel, the pulsations of the sac ceased spontaneously, but other circumstances contributed to the fatal termination. We have much pleasure in continuing our series of aneurism cases, and from notes taken by the house-surgeon Mr. Lingham, we gather the following details.

John B——, aged seventy-four, was admitted Jan. 7, 1851, under the care of Mr. Avery, with aneurism of the femoral artery. He stated that his habits had been temperate, and that thirty years of his life had been spent as a sailor in the merchant-service, during which period he was exposed to many hardships. Two years

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since the patient contracted gonorrhœa, when a small swelling made its appearance in the groin; he consulted a surgeon, who gave him medicines which nearly, not altogether, removed the tumour. The latter, however, made its appearance again in a very short time, and had been increasing up to admission. Patient did not suffer much inconvenience from the swelling until about three months prior to his entering the hospital, when, after moving some furniture, (in which effort he fancies he exerted himself too much,) the tumour rapidly increased, and a pulsation was now for the first time noticed in the swelling.

On examination, a large pulsating tumour was found on the upper part of the right thigh; it occupied the position of the femoral artery, and extended from about three inches below Poupart's ligament into, and apparently entirely filling, the right iliac fossa. A pulsation synchronous with that of the heart was perceptible in every part of the tumour, and a distinct bruit de souffle was yielded on auscultation. The whole limb was swollen, œdematous, and painful, the skin pale, and the temperature below that of the corresponding leg. The femoral artery on the sound side was found small in volume, its impulse feeble, and giving to the finger the sensation of a peculiar sharpness. The pulsation of the radial artery was found devoid of power; these symptoms leaving but little doubt but that the arterial system was extensively diseased. The patient could not assume the recumbent posture, as the pain in the groin was thereby considerably increased, and he was obliged to be constantly sitting up in bed. No rest could be obtained at night, on account of the pain and the sitting posture, tongue moist and slightly furred.

Mr. Avery ordered wine and a nutritious diet; the limb to be bandaged from the toes upward, and five grains of soap-pill at night. On the next day it was found that the patient had passed a restless night; the tumour had diminished in size, and pulsation had *totally ceased* in every part of it; the limb was less swollen, and its temperature had become lower than it was on the previous day. The impulse of the femoral artery on the left side was now found less abrupt, and improved in volume. On the third day after admission, the patient was able to lie down; he had some sleep at night; the pain was less severe, but the temperature up to the knee very low. The leg began to present a mottled appearance, and the tumour had resumed neither pulsation nor bruit. The patient appeared weaker, but felt comparatively free from pain. Tongue cleaner; pulse seventy, feeble, but regular.

On the fourth day, the pain was very severe in both limbs, the lower portion of the right leg becoming colder and of a deeper mottled appearance; the left leg was at the same time of the ordinary temperature, though the impulse of its femoral artery had again become feeble. The aneurismal tumour remained stationary. Warmth was now applied to the affected limb by means of cotton wool. Mortification made, however, rapid strides, for on the fifth day it had appeared on the inner side of the leg. The pulse now fell to sixty, and the tongue became dry.

The sphacelus had on the eighth day extended in every direction round the limb up to the knee, in which region an effort at the formation of a line of demarcation was perceived; the pulse became small and feeble, and the tongue brown; the patient did not suffer any pain, but was becoming drowsy. The tumour presented no renewed pulsations, and was diminishing in size.

On the tenth day there was considerable prostration of strength; the sphacelus travelled higher; the emanations from the limb were of a very fœtid character; the pulse feeble, the tongue dry, and the patient very heavy. These symptoms went on steadily increasing up to the fourteenth day, when the patient expired. The sudden cessation of the pulsations in the tumour, and the subsequent phenomena, gave the post mortem examination a peculiar interest.

The lungs were completely filled with tubercles in the upper portion, and a cacoplastic, yellow exudation had consolidated the inferior third of the right lung. The valves of the heart were tolerably healthy; in the arch of the aorta and the remaining portions of this vessel steatomatous and calcareous deposits had caused a complete degeneration of the coats. The vessels connected with the aneurismal tumour were carefully removed; and on a dissection being made, it was found that the aneurismal dilatation of the femoral artery began just below the branching off of the epigastric, the outline of the sac being lost a little below the origin of the profunda, where the aneurismal walls were very undefined. The cavity was soft, filled with coagula; it would have admitted a large orange, lay in a somewhat crescentic shape just over the hip-joint, and communicated with the artery by what originally had been a rent in the vessels. The profunda artery was *quite obliterated* by the pressure of the sac with which it communicated, the aperture being, however, stopped up by a clot of blood. A few soft coagula were found in the femoral artery above and below the sac, which latter was lined with soft fibrinous layers. Below the sac the same vessel was completely filled with firm fibrinous layers, through the centre of which ran a minute canal. The aorta and external iliac were much diseased, hard, and puckered. Both the femoral vein and artery run in front of the sac. The opening of communication between the artery on the cardiac side and the aneurismal cavity was about two inches and a half in circumference, and it seemed very likely that the vessel just above it, as well as the vein, had been obliterated by the pressure of the tumour itself extending upwards behind the vessels. The vein had the appearance of a thick cord, and was obliterated in front of the artery; this venous canal was filled with coagulum half-way down the thigh. A portion of the sac extended upwards into the iliac fossa, above the epigastric artery; and in the walls of this sac an opening was observed, by which blood had escaped, and filled up the space along the external iliac artery up to the right kidney. Towards the trochanter minor, and underneath the artery, there was a sort of offshoot from the sac, about the size of a small apple, which was filled with firm fibrinous layers.

In the history of this case there are two features worthy of arresting the attention for a few moments —first, the length of time the tumour existed without pulsating; and secondly, the occurrence of gonorrhœa in connexion with that tumour. Though the growth of aneurismal dilatation is slow, the pulsations generally appear as soon as the swelling has attained a sufficient size to attract attention. It is not improbable that the fact of the artery lying in front of the sac had some influence on the tardy manner in which the pulsations became apparent, and the effort made by the patient in moving a piece of furniture had perhaps caused a sudden displacement and increase of size, which gave an impulse to the tumour. Whether the swelling which sprung up simultaneously with the gonorrhœa was merely an irritated gland or an aneurismal tumour, cannot with complete certainty be determined, but the likelihood is that the sac was already formed. This circumstance will serve as a renewed caution that we should not proceed to plunge the lancet into a swelling without some attention to all the symptoms; for it is extremely probable that the knife in this instance would have laid open an aneurismal sac instead of an abscess; the mistake being the more pardonable as no pulsation was as yet noticeable in the tumour.

The aneurism, as happens in old age, had probably

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had its origin in calcareous deposit and ulceration of the inner coat, the two latter having given way and been lacerated, first slightly and then suddenly when the effort was made. As to the spontaneous occlusion, it may be accounted for in two ways—first, as stated above, the aperture of communication between the artery and the sac on the cardiac side may have been occluded by a pressure of the tumour upwards, or the aneurism, becoming suddenly diffuse, and the blood accumulating around the external iliac artery, may have exercised on that vessel a steady though not a powerful compression, and thus determined the obliteration of the artery; or the sac situated between the pectineal line and Poupart's ligament, and at the back of the artery, may have sufficiently compressed the vessels to render them impervious. Mr. Avery inclines to the first of these opinions. Or these three causes may be supposed to have been acting either at the same time or shortly after one another.

When we consider the patient's age, his debilitated condition, and the peculiar state in which a limb is thrown by the existence of an aneurism, we shall not be surprised to find that the sudden obliteration of the artery (or at least comparatively sudden) was followed by gangrene of the limb. From the steps taken by Nature herself in this case, we are taught a useful lesson; they show, if we do not err, that a gradual diminution of force in the current of the blood is preferable for obtaining coagulation and consolidation within the sac, than a sudden obliteration of the artery by ligature. It is true that the collateral circulation, by the mere existence of the aneurism, is already very active, but though in certain individuals that collateral circulation will at once carry a sufficiency of blood immediately after the tying of the artery, it is clear that a little more time given for due preparation, by gradually retarding the flow of blood by the main trunk, has more chance of success. These precautions (which are taken when pressure is preferred to the ligature) are certainly of some importance when we remember the low tone of the vital power in the limb, generally concomitant with the progress of an aneurism.

The complete sphacelus which overtook the limb was probably not unconnected with the peculiar state of the vein; pressure on venous trunks, or lymphatics, always produces more or less œdema of the limb, diminution of temperature, and sluggish circulation. It is plain that in a case of this description the surgeon has the grief of finding himself powerless, the age of the patient putting every operative interference out of the question. In a young and healthier subject, the spontaneous cure would perhaps not have been followed by gangrene, and even then amputation might have been performe l. Where, however, spontaneous cure does not occur, the deligation of the external iliac artery might be tried in preference to Brasdor's method of tying on the distal side of the sac. (See Lacoste's and Deschamp's cases in Mr. Erichsen's work on Aneurism, Sydenham Society.)

As to the risks of hæmorrhage after the ligature, we should state, that in the case of popliteal aneurism under the care of Mr. Avery, which we have published, arterial hæmorrhage took place seven weeks after the operation, and five after the removal of the ligature. The loss of blood was not, then, merely venous, as we had at first been led to believe and to state.

ST. GEORGE'S HOSPITAL.

Wound of the Chest by a Pistol-Ball; Death.

(Under the care of Mr. Tatum.)

It has been ascertained by cases, that wounds of the lung, made either by the thrust of a sword or a ball, are not necessarily fatal; the result depending on the more or less inflammation of the pleura and pulmonary substance, induced by the injury, and mainly on the amount of primary and secondary hæmorrhage. In very few cases is the surgeon more earnestly intreated to give a prognosis as in wounds of this description, and in none perhaps is it so difficult to answer in a decided manner. Very extraordinary recoveries have taken place, and the least expected fatal consequences have been known to occur. We therefore think of serving a useful purpose in recording the following case, lately under the care of Mr. Tatum, where the patient perished by his own hand, the pistol-ball having traversed the chest, and wounded the lung.

William W——, thirty-six years of age, was admitted, Jan. 29, 1851, under the care of Mr. Tatum, with a pistol-wound of the chest. On the left side, a little to the left of the median line, and about opposite the fourth or fifth rib, is a dark circular aperture, which will hardly admit the tip of the little finger; a small quantity of blood is oozing from the aperture, whilst the cellular tissue around is in an emphysematous condition. A probe passed into the wound traverses it for about two inches in a direction downwards and outwards, towards the axillary space. About the centre of the posterior border of the left scapula was observed a hard swelling, which when cut upon and removed, was found to be a leaden ball, somewhat irregular in form, about the size of a small nut, and in which two minute portions of bone were embedded. The face is pale, respiration hurried, and intense pain is felt in the region of the wound, which is increased during inspiration. Pulse 100, full and sharp; there is great thirst, and slight nausea.

Upon inquiry of his friends, it was found that the patient had been ailing for some time with some chest affection, having complained of difficulty of breathing, expectoration, and pain; but no cause can be assigned for his attempting suicide. The act occurred at half-past eight this morning.

Soon after his admission, the pain increased in severity, the pulse rising to 120, and the sputa coughed up being tinged with blood. Mr. Tatum directed venesection to be performed. He was therefore bled from the left arm to twenty-four ounces. During the bleeding, the pain was diminished; the pulse became weaker and less frequent, but it soon afterwards regained its frequency, though not its wiriness or strength, the beats amounting to 145 per minute. The pain having become more acute, he was again bled at one P.M. to nine ounces, this again rendering the pulse weaker, though not lessening its frequency more than a few beats. The pain remained as severe as heretofore, for which, at half-past one P.M., thirty minims of Battley's solution were prescribed to be taken at once. Three P.M.: pulse 160, soft; pain not quite so severe; patient feels giddy, and this sensation is increased when he speaks. Six P.M.: Pulse 130, soft; pain much diminished; respiration easier, slight expectoration, tinged with arterial blood. Ten P.M.: Pulse 120, weak and compressible; patient is dozing; respiration freer; when coughing, air can be heard passing from the lung.

Second day.—Pulse 160, weak; sputa more abundant, but less tinged with arterial blood; cough more troublesome; less pain in the chest. Mr. Tatum ordered sulphuric ether and ammonia to be taken in camphor mixture.

The same symptoms continued more or less during the day, the mucous rattle being more evident, with a further degree of prostration. On the third day the pulse was still weaker; the patient apparently in a sinking state, lying half unconscious; he gradually sank, and expired at half-past four P.M. During the day he had taken some brandy.

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Post-mortem Examination.—Body well formed and in good cond tion; a small circular aperture, the position of which has been above indicated, was observed in the left side of the chest. A small wound about an inch long, was also seen about the centre of the posterior border of the scapula. Thorax: The pleura throughout the whole of the left cavity of the chest was covered with a thin coating of recently effused lymph, of a reddish-yellow colour; this was found on both pleura pulmonalis and costalis. The external surface of the lung was not adherent to the parietes, but its back and inner surface were adherent respectively to the diaphragm and pericardium. The pleura costalis of the right side was intimately adherent to the pleura pulmonalis by numerous old adhesions. The left pleural cavity contained a considerable quantity of bloody serous fluid, in which several dark clots of blood were found. There was *no* right pleural cavity. The left lung was smaller than natural, being apparently compressed by the fluid above and on the outside of it. The lower part of the upper lobe, about the centre of its margin, presented a small, irregular-shaped sloughy aperture, which was traced through this lobe to the fissure separating it from the lower lobe, whilst another aperture was found exactly opposite this, through the upper margin of the lower lobe, about its centre. Not only the margins, but the walls of the aperture throughout were in a sloughy condition. The surface of the lung around presented evidences of recent inflammation, whilst its texture in the vicinity of these parts was tense and solid from the infiltration of lymph. The pulmonary substance, more particularly that of the upper lobe, was studded throughout with small miliary tubercles. On the right side the lung was in a similar condition, especially at its upper part, where two small vomicæ were found, the tissue of the upper lobe being almost impervious to the passage of air.

Opposite the opening before mentioned in the integument, which corresponded to the fifth rib, the substance of the pectoralis major muscle had been traversed by the ball, in an oblique direction upwards and outwards to a point corresponding to the third rib, which was comminuted; whilst behind, the ball, after traversing the lung, had fractured the fifth rib about four inches from the vertebræ; then continuing its course upwards and backwards in an oblique direction it had penetrated the body of the scapula just external to the central part of its posterior costa, making its way through the substance of the infra-spinatous muscle, the fascia covering which was not injured previous to the extraction of the ball.

It will be perceived that the latter, after striking the fifth rib, took a direction upwards and outwards, this oblique course showing plainly that the instances we hear of balls running round the chest may easily occur, provided the projectile come in a slanting manner. But it has been lately stated by a French surgeon, that when a pistol is held close to the chest, so close indeed that hardly any air will pass between the muzzle and the skin, that the ball may, instead of traversing the thorax, rebound from the chest. Facts have been brought forward to prove this; we must therefore believe what we are told. Still it is well known that the suicide who places a pistol on his chest is very likely to fix it very tightly upon the parietes; and though we are not quite sure that such was the case in the present instance, we cannot but take note that here the ball took an antero-posterior though slightly deflected course.

Venesection had been largely performed in almost all cases of the above kind which recovered. We are therefore not surprised that Mr. Tatum directed blood to be taken from the arm; indeed, had the patient's lungs been quite sound before the injury, he would have had a fair chance of recovery. A case of an analogous description occurred in Paris during the street-fighting of June, 1848. A member of the National Assembly was struck by a ball which traversed the chest, and must have deeply wounded the lung; he was largely bled on the spot, and several times afterwards, and finally recovered.

GUY'S HOSPITAL.

False Aneurism of the Brachial Artery; Cold; Pressure; Deligation of the Artery. Death. Autopsy.

(Under the care of Mr. Hilton.)

Several cases of aneurism, both of the true and false kind, have lately been treated in the metropolitan hospitals; each of them presenting features at once interesting and unusual, both as regards the progress of the tumours, the treatment, and the results. The consideration of these cases will very probably prove instructive, as opinions vary considerably touching the treatment of true and false aneurism; and it is not a little surprising that uncertainty in this respect should still exist, as much attention has at all times been bestowed on these dangerous affections.

At first sight it would appear that the treatment of false aneurism must be very simple, as the phenomena marking the development of the disease are so well known, the arterial tunics in a healthy state, and no aneurismal diathesis complicating the cases; but it is otherwise. Five methods may be employed; the application of ice, compression of the artery above the tumour, tying of the vessel on the same spot, the deligation of the artery above and below the wound without opening the sac, and the same procedure preceded by the turning out of the clots.

We refer to that variety of false aneurism which is completely circumscribed by a sac, the diffuse requiring a somewhat different treatment, and whether the sac be composed of a dilatation of a fibrinous plug, as maintained by Mr. Hodgson, or by the cellular tissue round the vessel, is not of great importance as to the treatment. It is, however, not sufficiently insisted upon, when the cellular formation is admitted, that it is the cellular *sheath* of the artery which forms the sac.

William B——, aged thirty-six, a butcher by trade, healthy-looking, and of a powerful muscular development, was admitted November 20th, 1850, under the care of Mr. Hilton, with a large swelling of the left arm, especially prominent on the front and inner side of the elbow-joint, extending half-way up the arm, and downwards nearly to the wrist. It appears that, two months before admission, while engaged in his trade, the patient let a sharp-pointed knife fall on the front part of his left arm. He lost a great deal of blood at the time of the accident, in the shape of a jet, and was rather surprised at this circumstance, as he was hardly aware of being wounded, but he considered at the time that the loss of blood would do him good.

The patient went to a surgeon, who immediately applied compression and a bandage; this effectually commanded the hæmorrhage; the pressure was continued for about a fortnight, when the patient removed the roller, and resumed his occupations. At this time, he observed a small swelling on the front part of the arm, about the size of a filbert, and pulsating so strongly that the movements were observable on the sleeve of his coat. It was now noticed that this tumour increased on exertion; and when he showed it to his surgeon, the latter performed venesection on the other arm; and he came to Guy's Hospital, as the swelling was rapidly increasing.

On examination, the tumour was found situated as described above; it was hard and solid, and situated

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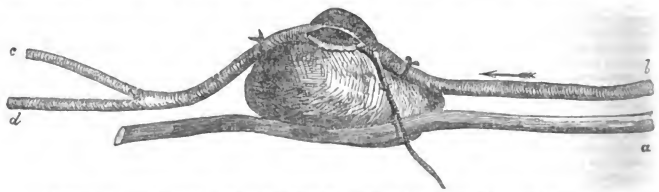
beneath the brachial artery, the pulsations of which vessel could be traced along and over the tumour. A bruit was perceptible where the artery passed over the swelling, but not in other portions of the latter. The radial and ulnar arteries pulsated distinctly, but seemed small; the patient complained of pain and numbness on the outer side of the forearm, and over the ball of the thumb.

Mr. Hilton ordered the limb to be kept very quiet, and the tumour constantly covered with a bladder filled with ice. These directions were carefully observed; the application of ice was steadily continued for about a fortnight, and it was observed that the tumour gradually diminished in size, was softer, and not so painful, that the pulsations were becoming less powerful, and that the bruit had quite disappeared.

Mr. Hilton now desired the ice to be discontinued, the arm to be placed on a splint, and Goulard's lotion to be constantly applied. It would appear that the patient, who was a careless, impatient man, made too free with his arm, for in the space of six days after the ice had been left off the tumour began to enlarge again. A bandage was now applied, and cooling purgative doses administered. A flannel roller upon carded wool was substituted, a few days afterwards, but the fluctuation in a portion of the tumour and the bruit presently returned.

On the 28th of December, being about five weeks after admission, Mr. Hilton resolved to apply pressure on the brachial artery, above the aneurismal swelling, so as to diminish the circulation in the vessel, and obtain a coagulation and obliteration of the artery and tumour. This method was tried for two days, but the patient was very unruly and impatient; he complained of severe pain, and plainly stated that he insisted upon having the artery tied, and that he would neither eat nor drink until Mr. Hilton had consented to operate.

This determination being actually persisted in, there was evidently no alternative left, and three days after the pressure had been first applied, Mr. Hilton operated in the following manner:—A longitudinal incision having been made in the course of the brachial artery, just over the tumour, and to the inner side of the most prominent part of the same, it was found that the vessel (as had been thought at first) was coursing over the tumour, which latter lay directly behind the artery. By a little dissection the vessel was laid bare, and a ligature placed above and below the original wound in the artery. When the threads had been tied, it was perceived that the aperture in the artery, situated on its posterior walls, was still giving passage to a certain amount of blood, which was passing into the sac. Mr. Hilton now found that a small collateral branch, delineated in the accompanying engraving, was furnishing the blood, and this being secured, the bleeding immediately stopped. We present the following woodcut to our readers, as exhibiting what was believed to be the relation of parts at the time of the operation:—



a, median nerve. *b*, brachial artery, traced over the aneurismal tumour, and dividing into ulnar (*d*) and radial (*c*). The artery is cut open for the purpose of showing the position of the original wound in the vessel towards its outer and posterior surface, which determined the direction in which the aneurismal tumour was formed—viz., behind the trunk of the wounded artery. The threads encircling the vessels point to the spot where the ligatures were applied.

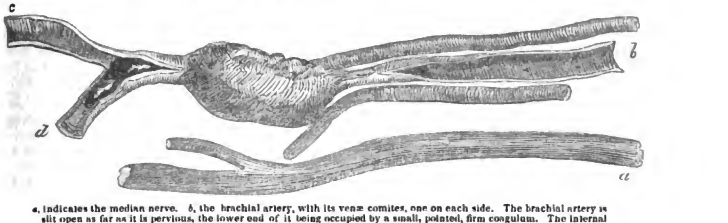
Mr. Hilton did not wish to disturb the sac or the clots, as he was apprehensive of disturbing the parts, of giving rise to extensive suppuration, and as the aneurismal tumour was lying behind the artery. The patient, who had not wished to inhale chloroform, progressed very favourably, and three days after the operation, Mr. Hilton removed two sutures. No union had, however, taken place in the external wound, and from the escape of a little gas and purulent matter streaked with blood, it appeared likely that suppuration of the sac would take place. The radial artery pulsated freely, but the ulnar did not beat; the hand and arm were warm, and the patient complained of no pain. At this time he began to cough rather frequently, and his chest being examined, mucous and sibilant râles were heard over a great portion of both lungs. On the seventh day after the operation, there was pain in the wound, and the arm became much inflamed, tense, and fluctuating, just above the bend of the elbow. Mr. Hilton introduced a lancet into the most yielding portion, and gave exit to some pus and decomposed blood, which, on standing did not coagulate. On the eighth day, the upper ligature came away, and some discharge of grumous blood took place, of a rather fœtid character. The second ligature became loose two days afterwards, and was removed; the patient progressed very favourably until the sixteenth, day, when feverish symptoms appeared, and the discharge from the wound became thin.

A superficial abscess now formed, about two inches below the wound, and diarrhœa and profuse perspiration came on. Mr. Hilton opened the abscess, and requested Dr. Hughes to see the patient. It was now evident that the lungs were greatly affected, and Dr. Hughes prescribed quinine and wine. On the twenty-sixth day delirium came on, the patient attempted to rise, and was so agitated that it was found necessary, to secure him to the bed. Fulness of the neck, without evident fluctuation, was now noticed, and Mr Hilton suspected the formation of pus under the cervical fascia. The patient died in profuse diaphoresis, twenty-seven days after the operation. The autopsy presented the following features:—

On dividing the skin in the median line blood was found extravasated into the cellular tissue, also into the sheath of the recti muscles from below the umbilicus to the pubes, and down to the right spermatic cord. The recti muscles, but especially the right, were lacerated. Pus was found in the cellular tissue of the neck, and between the muscles and vessels of the same region. It was diffused under the deep cervical fascia, and extended across to the opposite side. There was

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no abscess, but a general infiltration. The lungs were congested, and presented marks of recent pneumonia. Bloody serum and puriform mucus were found in the bronchial tubes on the right side. Heart healthy; kidneys hypertrophied and congested; liver large, and loaded with blood. On the left arm, over the brachial artery, a little above the elbow, is the granulating wound where the artery was tied; an inch to its outer side, the original puncture by which the artery was injured, and which leads to the suppurating sac of the aneurism. The vessels concerned in the disease were carefully removed and dissected, and form a valuable preparation in the museum of the hospital. The following engraving is an accurate representation of the parts:—



a, indicates the median nerve. *b*, the brachial artery, with its venæ comites, one on each side. The brachial artery is slit open as far as it is pervious, the lower end of it being occupied by a small, pointed, firm coagulum. The internal aspect of the vessel is transversely ribbed or corrugated, as is usual when an artery has adapted itself to a diminished flow of blood through it. Several small arterial apertures are seen in the open brachial artery, establishing a collateral circulation. *c*, radial artery laid open; it is free from coagulum, and several small arterial apertures are visible, receiving blood from above by collateral branches,—this circumstance explaining the pulsations of the vessel noticed during life. *d*, ulnar artery, occupied by a firm coagulum, extending from below the position of the ligature upon the brachial artery, and intercepting the course of the blood through the ulnar.

In reviewing the various facts connected with this case, one is naturally led to inquire (1) into the nature of the morbid phenomena, (2) the treatment, and (3) the cause of death. It seems as to the first question that a kind of diffuse aneurism followed an originally circumscribed one, or else that the sac of the latter being thin, expanded largely under the impulse of the blood issuing from the artery. As to the false aneurism, the size of a filbert, which was noticed after the first bandage was removed, it very probably arose in the manner pointed out by Mr. Hodgson, in his work "On the Arteries," p. 485:—"When an artery is wounded, compression is sometimes employed so as to stop the circulation through the vessel until the external wound united. When this object is effected, the compression is omitted, and if the adhesion at the extremity of the vessel be not sufficiently firm to resist the impulse of the circulating blood, the formation of an aneurism commences." The rapid increase of the tumour on the removal of the roller, likewise occurred in a case related by Foubert, (Hodgson,) where the processes of spontaneous cure, in a false aneurism of the brachial artery, were going on favourably during compression, when the patient left off his bandages, and the tumour increased so rapidly as to render an operation necessary.

Though compression of the tumour rarely effects a cure, it should not be forgotten that lamellated coagula may arrest the disease, either with or without the obliteration of the artery. Dr. Gooch mentions a spontaneous cure of a false axillary aneurism in a little boy, which was accomplished in eighteen months; and instances are brought forward by Saviard, Petit, Scarpa, &c., where the spontaneous cure was not accompanied by obliteration of the artery.

2. If we turn to the treatment, we shall see that Mr. Hilton endeavoured to obtain the diminution and solidification of the sac, as well as the occlusion of the aperture in the artery by ice, rest, and compression (the patient had been bled before admission.) Mr. Guthrie, in his "Lectures upon Wounds of Arteries" mentions two cases of Larrey's, and one of Delpech's (Cases 113, 62, & 63,) where false aneurisms of the femoral and carotid arteries were cured by the application of ice, rest, and low diet; Sabatier also cured a false aneurism under the clavicle by the application of cold combined with Valsalva's plan.

Nor has compression of the tumour always been unsuccessful. Arnaud, in the "Mémoires de Chirurgie," mentions a case in which he "pushed the blood back into the artery" with a sort of tourniquet, for a false aneurism of the middle of the thigh; the patient was cured, and the compression applied in the presence of La Peyronie, Petit, Ledran, &c. Dupuytren also succeeded with compression of the tumour, in the case of a little boy who had wounded his thigh with a knife, the accident having been followed by a false aneurism.

As to the method of placing a ligature on the artery, we find that Mr. Hodgson says—"The same modes of treatment should be adopted in aneurism arising from wounded arteries, as in those which are the consequence of a morbid condition of the coats of the vessels." Mr. Guthrie holds, however, that there is much danger of secondary hæmorrhage from the lower portion of the artery if the vessel be tied at a distance; and he advises to tie above and below, as has been done by Mr. Hilton.

3. Touching the cause of death it seems to lie between pneumonia and purulent absorption; it is not easy to say whether the leaving of the sac and its contents had much influence on the subsequent deposition of pus in the neck, as purulent matter was not found in other parts; but it should be observed that cases of phlebitis and purulent absorption had recently occurred in the hospital.

It is worthy of record that the knife, although its point fell vertically on the front of the arm, wounded the artery in its external and posterior portion; and it may be inferred from this slanting direction of the blade, that the wound of the vessel was originally but very small. This peculiar direction of the knife will also account for the great distance which was found to exist between the external wound and the injured portion of the artery.

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KING'S COLLEGE HOSPITAL.

Removal of the Lower Jaw on the right side for Cystic Disease; Recovery.

(Under the care of Mr. FERGUSSON.)

WE have had frequent opportunities of reporting cases of malignant diseases of bone, where the surgeon has the melancholy conviction, at the time of removing the affected parts, that the unfortunate tendency to reproduction will, sooner or later, destroy the patient; but the successful operation which we have this day to put upon record, was necessitated by an affection of bone, which holds out a fairer prospect. The osseous structure was here the seat of cystic disease, and as the whole of the jaw on the right side was removed, it is extremely probable that the evil is thoroughly eradicated. The case, from notes taken by Mr. Edwards, one of Mr. Fergusson's dressers, runs as follows:—

L. S——, aged forty-eight, single, a professor of music, of fair complexion and nervous temperament, was admitted March 20, 1851, under the care of Mr. Fergusson, with a very prominent tumour occupying the greater portion of the inferior maxilla. The patient gave the following history:—Thirteen years ago his head was attacked with erysipelas, when the right cheek was observed to swell considerably, and continued to increase for some time. These symptoms, however, subsided, but three years afterwards the patient began to suffer from toothache and pain, extending up the right side of the face. As the two molar teeth had become carious, they were extracted, and the pain subsided.

Two years subsequently a tumour formed over the alveoli whence the above-mentioned teeth had been removed; the patient made an incision into this swelling with a penknife; some glairy fluid escaped, and the parts seemed after a little while to be cicatrized. But the tumour did not completely subside; and the patient fell into the habit of puncturing and evacuating the contents of said swelling whenever it became distended with fluid. This continued for about six months, when the gum healed up, and no more uneasiness was felt. One year and a half after this subsidence, various cerebral symptoms set in, among which was the occasional inability of seeing more than a portion of a word at a time. While in this state the patient was suddenly seized, during his breakfast, with paralysis of the right side of the face; he lost the faculty of speech, and his mouth was drawn to the left side. This attack was, however, of very short duration, for all the symptoms disappeared in the course of three days, no remedies but a little purgative medicine having been taken.

At this period the body of the lower jaw on the right side, about midway between the joint and the symphysis, begun to expand outwardly; this swelling increased very slowly, and occasioned no pain; the protruded part felt hard and smooth, but on pressure a slight crackling could be heard. Within the last twelve months the growth has been more rapid; and the patient having consulted Mr. Fergusson about five months ago, the latter made an opening into the tumour within the mouth, where it was slightly protruding, and this measure gave exit to some glairy fluid. The part continued to discharge the same kind of liquid for some time, when the patient applied to another surgeon, who inserted potassa fusa, and kept open the part with lint tents.

This proceeding occasioned severe pain, and entirely changed the character of the discharge, which became fœtid, mixed with sloughs, and increased in quantity. Besides the two molar teeth already mentioned, the patient lost another molar and a bicuspid on the same side; the first fell out spontaneously, and a second was extracted. It is worthy of note that neither of these had any fangs left.

On examination, the tumour was found to be the size of a large orange, forming a solid mass, seemingly attached or forming part of the lower jaw on the right side, and extending from the angle of the maxilla to the symphysis. At the latter spot the bone appears to be gradually expanding into the tumour, which latter is hard, smooth, and painless to the touch. The skin over it is not in the slightest degree altered, and the swelling does not project much within the mouth: an opening exists, however, in the gum, through which the probe passes very easily into the cavity of the tumour. This bony cyst is filled with fœtid matter which escapes when the patient inclines his head forwards. The gum is rather spongy, but the general health good.

Mr. Fergusson ordered a silver double-grooved plate to be adapted to the interior of the mouth, with the view of receiving the upper and lower molar teeth on the sound side, by which means those of the affected side were kept about an inch apart. It was evident that no remedial means could be of avail, except the complete removal of the diseased portion of the jaw; and as the tumour had plainly involved the greater part of the latter, Mr. Fergusson resolved to remove the right half of the lower maxilla from the articular process to the symphysis.

On the 22nd of March the patient was brought into the theatre, and rendered insensible by chloroform. Mr. Fergusson began by extracting a lower incisor tooth and the canine on the right side; he then passed the point of a bistoury into the mouth, about half an inch below its angle, without dividing the red part of the lip. The knife was then made to run along the lower margin of the jaw to about the middle of the tumour, and the soft parts having been detached from the bone, Mr. Fergusson introduced the common straight saw, with which the bone was very clearly divided at the symphysis. The next step consisted in carrying the external incision over the tumour, nearly up to the articulation, and dissecting up the flap towards the eye and nose. Mr. Fergusson then rapidly separated the muscles attached to the inner surface of the jaw, and the latter having been disarticulated, the whole mass was removed.

The hæmorrhage was not by far so abundant as might be expected from the usual vascularity of the part; the facial artery was then tied both above and below, as well as the facial vein, from which the blood issued profusely, the superior dental artery, and several other smaller branches. The margins along the line of incision were accurately brought together by stitches, and one of these, towards the centre, was left unfastened, to afford an escape for whatever oozing might take place, directions being given to have it tied in the evening. The patient, who had been kept under the influence of chloroform during the whole operation, was removed in very good condition.

Mr. Fergusson took occasion to remark to the pupils assembled, that the present was a good example of a benign tumour of the jaw; it had, however, created much deformity, and if not interfered with, would have ultimately worn out the patient. This tumour was one which the surgeon could, in the most legitimate manner take away. He (Mr. Fergusson) had considered it advisable to remove the whole of one side of the jaw—first, because the disease had involved the greater portion of the bone; and secondly, as the small portion towards the condyle, which might be considered as sound, would have been of very little use to the patient; much time having besides been gained by not sawing the ramus, but disarticulating at once. The steps of the operation had been the same as are usually followed. Mr. Fergusson would,

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however, direct the attention of the pupils to the fact of his not dividing the red portion of the lip—a proceeding which, he thought, would be greatly conducive to a satisfactory appearance afterwards. He had likewise refrained from carrying the incision at once up to the ear, as he was anxious not to divide the facial artery until the most tedious and troublesome part of the operation—viz., sawing the bone, was accomplished.

Mr. Fergusson had found the straight common saw the most convenient instrument for dividing the symphysis—far preferable, indeed, to the circular, or the chain saw. The disarticulation had been greatly favoured by the tumour being hard, and therefore affording a convenient lever. He had tied both the upper and the lower end of the facial artery, to obviate any chance of secondary hæmorrhage, as had once occurred in private practice in a similar case. Mr. Fergusson further stated, that the question of using chloroform during operations on the mouth was practically answered by the present case, where one of the most important operations usually performed on the face had been satisfactorily accomplished during insensibility from this agent. The narcotism had been kept up to a full extent for a long time, no unpleasant effect had been produced on the larynx or on respiration, and the patient, as usual, had been unconscious of what was going forward.

Mr. Fergusson then proceeded to divide the tumour longitudinally, and the latter proved to be of the cystic kind, presenting a cavity which would have lodged a small orange. It was filled with a fœtid secretion, the shell of bone forming the walls of the cyst being generally about a quarter of an inch thick. It was now evident that the cyst had been formed by a dilatation of the walls of the jaw, and was lined by the same kind of membrane which is seen in chronic abscess. This membrane had now passed into a state of gangrene, probably from the caustic solution which had been used. The patient progressed very favourably, with the exception of a little cough, and discharge into the mouth. On the fourth day after the operation, the line of incision was closed by first intention; there was no pain, but the mouth was a little drawn to the left side. On the eighth day the patient was allowed beef-tea, eggs, and some veal. On the thirteenth day, he began wearing the silver apparatus between the front teeth, on the left side, so as to counteract the usual traction towards that portion of the face, and also in order to give support to the mouth and soft parts.

On the fifteenth day the patient left his bed, the wound being almost completely cicatrized, and soon afterwards he was discharged in a very favourable condition, being able to masticate tolerably on the left side, and not having experienced great prejudice in his articulation or appearance.

The formation of cysts within the substance of bone is not a very frequent pathological occurrence, though it is doubtless one which it is important to recognise and distinguish from malignant disease, as it is so amenable to remedial means. The history, shape, absence of pain, peculiar secretion, and crackling sensation, will for the most part be sufficient guides; the only growth with which these cysts might be confounded being another kind of cyst, well described by Dupuytren, containing a solid fibrous mass. The disease existing in Mr. Fergusson's patient is analogous to the affection mentioned by Mr. Stanley, in his work on the Bones, (p. 267.) "Membranous cysts, containing a glairy fluid, originating within the jaw:—These cysts, in enlarging, usually cause expansion of the walls of the jaw, and they are found to possess more or less complete osseous parietes, apparently formed by hypertrophy of the cancellous structure of the jaw. Occasionally the membranous cysts, instead of expanding the walls of the jaw, cause the absorption of its outer wall, so that the tumour they form projects on the outer side of the jaw. This disease is usually of slow growth, and there have been instances in which the tumour of the jaw formed by it has acquired a large size."

The various circumstances connected with Mr. Fergusson's patient would tend to show that remedial agents have very little power over the growth and development of these osseous cysts, except, perhaps, they were very early attacked from without, when they do not show a tendency of protruding into the mouth. The present case will yield an additional proof of the comparative safety of removing one side of the lower jaw, and confirm the well-known fact that operations upon the inferior maxilla are much more likely to be successful than those upon the superior. The records of surgery afford many examples of a successful issue after removal of larger or smaller portions of the lower jaw.

Mr. Fergusson stated in his remarks that this case might seem decisive as to the propriety of using chloroform in operations upon the face; and it certainly appears that apprehensions are far too anxious in this respect. The patient, who had assumed the recumbent posture, was perfectly insensible through the whole operation, as Dr. Snow, who administered the anæsthetic agent, carefully held a sponge dipped in chloroform close to the patient's respiratory inlets, and thus succeeded, without obstructing the operator, in keeping the man in a perfect state of narcotism.

In examining the patient just before he left the hospital, we were struck by the small amount of deformity produced by the obliteration of so important a portion of the face; and as Mr. Fergusson had not divided the red portion of the lip, the continuity and symmetry of the mouth was uninterrupted, and the lines of incision hardly distinguishable. This result is the more satisfactory, as it may be presumed that fibrinous matter will in time be thrown out, and give the parts a useful amount of firmness. The small amount of hæmorrhage during the operation will go far to prove that Mott, Cusack, Walter, Græfe, and Gensoul, were rather too timid when they tied the carotid artery previous to the operation. Listranc very wisely dispensed with this preliminary step.

Gout and Cancer.

(Under the care of Dr. Budd.)

A case has lately occurred in this hospital, which excited some interest, as two diseases of a different kind, and seldom met with in the same subject, were found on a post-mortem examination. These two affections were gout and cancer; and though it may be freely admitted that the circumstance may only be a coincidence, there is, nevertheless, room for a little speculation. We are told by authors on cancer, that malignant manifestations are the consequence of a vitiated state of the system; this state may be hereditarily transmitted, but it is likewise acquired, and no great effort would be needed for believing that this vitiated condition is brought on *gradatim*, and is in some degree the result of previous and distinct morbid tendencies. There are, without doubt, a certain number of links between the pathological phenomena which sometimes appear in succession; some of these connecting media may be obvious, as is the case with rheumatism, pericarditis, and chorea; with scarlatina and dropsy, &c. &c., or they may be very obscure, as happens with uterine irritation, and purely mental manifestations. However this may be, we are anxious to put the following case upon record, both as an illustration of very extensive chalky deposit, and as putting in juxtaposition gout and cancer.

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Shadrach Sp——, aged sixty-eight, of fair complexion, and well built, was admitted into Rose ward February 5th, 1851. When young, he was remarkable for great strength, and always enjoyed good health till within the last ten years, during which time he has suffered from repeated attacks of gout. The patient was not very temperate in his younger years, and drank chiefly beer. The first attack of gout came on when he was about fifty years old, and for the next six or seven years he had an attack once or twice a year; the last three or four of these made him keep his bed for so much as thirteen or fourteen weeks at a time.

About ten years ago he first noticed the formation of chalk stones about the phalanges, which deposits were so hard that he could write with them. Six months since the deposits increased very much, and up to his admission they have gone on more rapidly. The elbow also became affected, the skin over the deposit ulcerated, and the chalk escaped. The patient was bled to faintness thirteen years since, but thinks he was worse for it; the more brandy he took the less he appeared to suffer; his principal medicine for several years being colchicum. The hands are completely crippled, all the fingers being surrounded with large masses of the chalk deposit, the skin over which is in many places ulcerated; and from the ulcers the chalky matter escapes; in front of the wrist, on the ulna, and on both elbows, there are large concretions. The feet and ankles are in a similar condition, and there is a very large collection under the skin of each heel.

The patient now complains of cough and shortness of breath; catarrhal sounds are heard all over the chest. Ammonia and colchicum were prescribed, and the cough improved; but on the nineteenth day after admission, the gout became much worse; there was pain in all the joints, and the poor man could hardly bear his left arm raised; tongue and skin dry, no appetite, pulse one hundred, respiration thirty-six. On the twenty-third day the urine began to escape from a sore on the penis, which was swollen, phimosed, and hard, these symptoms exciting a suspicion that the deposits above mentioned were likewise obstructing this organ. The patient went on suffering severe pain, with occasional intermissions, until the 17th of March, being the fortieth day after admission, when he became very drowsy; his hands were dreadfully distorted in consequence of the increasing deposits, and the glans penis now presented more the appearance of scirrhus.

Dr. Budd ordered a lotion of phosphate of soda, two drachms to the ounce of water; this did not agree with the part, and a lotion of dilute nitric acid was substituted. The patient had been taking benzoate of ammonia, twenty grains to the ounce of water; but being now much worse, he was again given colchicum, with ten grains of sesquicarbonate of ammonia for a dose, with morphia at night. He died on the 31st of March, about eight weeks after admission.

On a post-mortem examination, large deposits of gouty matter were found in all the joints, particularly those of the hands and feet, which were very much distorted; also in the sterno-clavicular articulation, on the inner surface of the patellæ, and between the extensor muscles and tendons of the thighs and legs. In the lungs, which were otherwise healthy, a cancerous tumour was found in the anterior portion of the upper lobe of the left lung, about the size of a walnut.

In the heart the valves were healthy, and there was no alteration of structure in any part of the organ. The liver was about the natural size; in the left lobe three small *cancerous* tumours were discovered deeply seated in the tissue of the organ. The gall bladder was very large, but contained no calculi. In the lower border of the spleen, anteriorly, there was a flattened tumour, of an irregular form, about one inch and a half in diameter, and having a glistening cartilaginous appearance. The kidneys were of the natural size, the pyramids presented a greenish appearance, and many white lines and spots were observed in them, apparently caused by the lithate of soda blocking up the tubes. There were some white specks in the cortical tissue, and a few small cysts on the exterior of each organ, which latter were encased in a large quantity of fat.

On making a section of the penis, which had become large, hard, blue, half-ulcerated, and completely phimosed, an abundant deposit of *cancerous matter* was found in and distending the glans; the anterior part of the urethra for about an inch was completely blocked up, and there was a fistulous opening just behind the glans on the left side. The bladder was quite healthy, and the femoral arteries much ossified. On examining the brain, a considerable quantity of subarachnoid fluid was found, which had a jelly-like appearance, but the cerebral substance appeared in a healthy state.

It is stated in the report that the patient had been intemperate, and had much indulged in beer. That the inordinate use of malt liquor has a great share in producing the gouty diathesis, has been shown by Dr. Budd. This physician found the disease very frequent among the ballasters on the Thames, many of them being admitted into the Dreadnought Hospital Ship, who were in the habit of drinking two or three gallons of porter daily. Dr Budd has frequent opportunities of verifying the correctness of his opinion from the gouty patients in King's College Hospital; we have often heard him point out the fact, and seen that most of those who are admitted for gout have been in the habit of drinking excessively of malt liquor.

Whether any urate of soda was deposited between the prepuce and glans, and there gave rise to irritation and subsequent cancerous degeneration in a previously phimosed penis, is not easy to determine; nor would the fact of the existence of cancerous tumours in the lungs and liver be favourable to this view. The same disease being, however, at the same time found in different organs, would tend to show that the amputation of the penis, which is frequently performed for malignant ulceration, is but too often a feeble barrier to the inroads of the disease.

UNIVERSITY COLLEGE HOSPITAL.

Longitudinal, Comminuted, and Compound Fracture of the Tibia; Secondary Amputation.

(Under the care of Mr. Erichsen.)

Longitudinal fractures, fissures or cracks of long bones, had up to a recent period been very imperfectly observed and described; whilst some high authorities altogether denied the possibility of their occurrence. M. Bouisson, Professor of Clinical Surgery at the Faculty of Montpellier, has published in *L'Union Médicale*, a very interesting and instructive essay on the subject, from which it would appear that Galen and Fabricius, ab Aquapendente, had faintly described the above-mentioned injury. Incomplete cases had since been brought forward by Heisch and others, but Leveille is the first who gave a distinct account of a longitudinal fracture of the tibia. After him, Jules Cloquet, Campaignac, Chaussier, Debrou, &c., recorded cases of a similar description. M. Malgaigne gives, in his "Operative Surgery," the engraving of a fissured femur, preserved at the Val de Grâce Museum; and he mentions fissured tibiæ, which may be seen at the Dupuytren Museum. Sanson, however, had maintained, that longitudinal fractures were simply very oblique ones; and Petit and Boyer stated that they had never seen such fractures.

That these fractures do occur is, however, at pre-

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sent placed beyond a doubt: M. Bouisson mentions a case under his own care, in which amputation was performed above the trochanter, and where the femur was split for the greater part of its length, by the effect of a heavy stone which had fallen on the thigh. This surgeon instituted a series of experiments, in which, by means of hammer and wedge, he produced longitudinal fractures in almost all the long bones of the body. He states that these bones are so seldom fractured in a longitudinal direction, because their form and their peculiar disposition shield them from the causes which produce longitudinal fracture, and render them more liable to those which are followed by transverse and oblique ones. M. Laforgue, Surgeon of the Hotel Dieu of Toulouse, has lately published, in *L'Union Médicale*, (Jan. 28, 1851,) a case of compound fracture of the tibia, which bears much analogy with the one lately under the care of Mr. Erichsen, and which we now wish to put upon record; for the tibia was fractured transversely by a fall upon the feet, whilst the patient jumped from a vehicle in motion; there was an external wound, and the longitudinal fracture, which had not been suspected, was found after the death of the patient. We now proceed to give an outline of the case, from the notes taken by Mr. Lister.

The patient is a lawyer's clerk, thirty-eight years of age, an habitual drunkard, and was admitted December 24, 1850, under the care of Mr. Erichsen. He had been indulging in his intemperate propensities, when, on going down Highgate-hill he slipped down a bank, the slope of which was about four feet. He got up, but immediately fell down again, and can give no account of himself until the time when a policeman held him up. The latter took him to the station, whence the surgeon who was called in to see him sent him to University College Hospital.

On examination, a very oblique and compound fracture of the right tibia was discovered: it extended from about two inches above the inner malleolus to about the same distance upwards and outwards, the lower end of the upper fragment being sharp, it projected against the skin. The limb presented much swelling; the wound was small, and some blood was oozing from it. The leg was placed on a Liston's splint, a compress applied to the wound, and evaporating lotions to the leg. At first, the patient seemed to be going on well, the oozing of blood ceased; the swelling abated; and the tenderness of the limb diminished; while some refreshing rest at night was procured by the administration of full doses of liquor opii sedativus. On the fifth day, however, the leg was found out of position; it was carefully reset, and well fixed by carrying the roller from within outwards on the foot, and from without inwards on the leg.

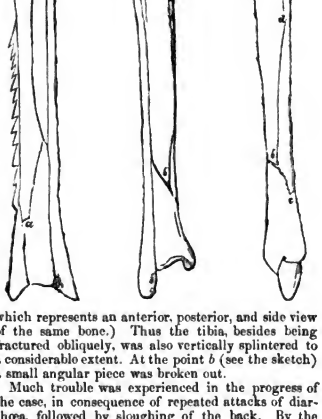
On the seventh day, the fragments had again separated, the sharp end of the upper fragment pressing against the skin. In the afternoon of the same day, symptoms of delirium tremens appeared; Mr. Erichsen therefore prescribed draughts with full doses of liquor opii and sulphuric ether, which had the effect of procuring sleep. On the following day the patient was much better, and slept well without opium on the next night. At this time, however, the wound began to discharge much purulent matter, which went on increasing in quantity until a burrowing abscess was found running up the leg for about five inches.

On the thirteenth day after admission, Mr. Erichsen passed up a probe, about four inches, close to the bone, and made an incision down upon the instrument, thus making a counter-opening, which gave exit to some pus. At this time, greater displacement was found than had ever been seen before, and the fracture was discovered to be comminuted; the patient began to suffer from diarrhœa, and Mr. Erichsen ordered him to be well supported by brandy and beef-tea. The relaxation of bowels was combated by chalk mixture, and the limb put on a double inclined plane.

On the fifteenth day, the tongue became white and dry, the pulse rose to 108, weak and quivering; the patient could not sleep, and presented a wild expression of countenance. The discharge from the wound was considerable, and of a brick-dust colour; the fragments were loose, and the integuments all round appeared much undermined. Mr. Erichsen now considered that amputation was the only means of preserving the patient's life, and accordingly took off the leg about four inches below the knee. When the wound was dressed on the evening of the operation, a considerable flow of fluid, or exudation of matter, took place from the flaps, and within forty-eight hours the latter yielded a purulent discharge.

On examination of the amputated limb, the muscles were found of a dark colour, as if infiltrated with blood: there was an abscess situated close to the bone, the sac of which extended from the wound for about six inches upwards towards the knee, and downwards in the direction of the ankle. The periosteum was thick, pulpy, and of a reddish-brown colour over the line of the fracture, in which situation it was but loosely attached to the bone.

The tibia was now discovered to be much more extensively broken than had been anticipated. From the oblique line of fracture diagnosed before amputation, two vertical lines were passing upwards on opposite sides of the bone, each about four inches in length, and reaching to within a short distance of the point of amputation. (See *c* and *d* in the engraving,



which represents an anterior, posterior, and side view of the same bone.) Thus the tibia, besides being fractured obliquely, was also vertically splintered to a considerable extent. At the point *b* (see the sketch) a small angular piece was broken out.

Much trouble was experienced in the progress of the case, in consequence of repeated attacks of diarrhœa, followed by sloughing of the back. By the free administration of opiates and brandy (from eight to twelve ounces of the latter per diem, besides porter) the patient has been carried through, and is now doing well.

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Mr. Erichsen remarked to the pupils, that the points of interest in this case were,—1. The occurrence of longitudinal fracture—an accident which has been denied by some surgeons of much repute—viz., by Sanson and others. 2. The slight nature of the violence by which the longitudinal fracture was occasioned. Most of the cases of longitudinal fracture on record have been the result of severe injury of the bone by gunshot violence, or some crushing force; but here the mere slipping down a ditch a few feet in depth occasioned this peculiar and unusual kind of fracture.

Fistula and Hæmorrhoids treated by the Platinum Wire made red hot by a Galvanic Battery.

(Under the care of Mr. MARSHALL.)

Electro-magnetism and the purely electric shock have for some time past rendered great services in certain nervous diseases; surgical complaints seem now in a fair way of likewise deriving benefit from the galvanic force. A little time ago, we stated that a very obstinate ulcer at Guy's Hospital had been brought to cicatrization by an electric moxa. We now have to put upon record an ingenious application of galvanism, devised by Mr. Marshall, to the cure of fistula and hæmorrhoids.

The peculiarity of the method rests principally upon the faculty of the red hot platinum wire to divide the textures as surely as a bistoury, and to this without causing any, or but a very trifling hæmorrhage. In fistula in ano, for instance, it is found that the charred surfaces throw off the eschar in a few days; that the healing process, without the aid of lint, commences at the fundus of the wounds; and that the whole tract soon closes up. We were somewhat anxious to witness this new application of the galvanic force, and having on the 29th of March seen three operations illustrating the same, we beg to subjoin a short description of them.

The first patient brought into the theatre was a man about thirty, who had been suffering for some time from fistula in ano. Various means had been resorted to in order to promote the healing of the tract, but to no purpose. Mr. Marshall therefore determined to lay open the intestine and fistula in the following manner. A battery of six strong cast-iron cells, with zinc plates and copper connexions, was disposed close to the operating-table; and the conductors (somewhat *thick* copper rods, to avoid the loss of galvanic force) were rendered flexible for about five or six inches, by an elastic tube filled with mercury. The pole held by the operator's right hand was in immediate connexion with the battery, but on the left side the current could be completed or interrupted by the intervention of a capsule filled with mercury. The extremities of the poles, slightly covered with mercury, were then connected with short holders, to which a platinum wire could easily be fixed, and when the assistant dipped the left pole into the mercury, the wire was seen almost immediately to become red hot.

Now the great advantage of using the galvanic force in this manner is, that the wire may be disposed upon the affected parts whilst *cold*; it is easily adapted by being flexible, and when it is so placed as to answer the operator's purpose, the circuit is completed, and the effect produced in the direction which the surgeon gives to the wire.

The patient having been put under the influence of chloroform, Mr. Marshall introduced one end of the platinum wire into the fistulous tract, and made it reappear at the anus; the two ends were then connected with the poles, the circuit completed, the wire became red hot, and was gently brought downwards, dividing all the interposed tissues and cauterizing them at the same time so effectually as to prevent any amount of hæmorrhage. The only dressing used was a piece of lint dipped in cold water applied externally.

Mr. Marshall has found from previous cases, both in private and hospital practice, that the whole tract heals very rapidly from the bottom after the casting off of the eschar, which separation generally takes place in a few days.

The second patient was affected with external hæmorrhoids, connected both with the verge of the anus and with the lower portion of the mucous membrane of the rectum, the protruding mass being as large as a pigeon's egg. Chloroform having been administered, the hæmorrhoidal tumours were drawn out by a peculiar kind of forceps, and the heated wire slowly drawn across the pedicle of the mass. This was repeated for different portions of the growths, and where a little oozing of blood took place, the wire was made to cauterize the part slightly, which measure at once stopped the flow of blood. Mr. Marshall stated that it was important that the wire should act rather slowly, as a rapid section was likely to allow of a little hæmorrhage. The time taken to sever a tumour did not however, as far as we could judge, exceed forty seconds.

The forceps to which we just alluded were constructed according to Mr. Marshall's directions; they differ from the usual instrument in having a ring about an inch in diameter at the end of each branch; when the forceps are closed, the rings are superposed, and gain a very firm hold of the part to be secured. Mr. Marshall prefers these forceps to the vulsellum.

The third patient was affected in the same manner as the last, the extruding mass of hæmorrhoids being, however, somewhat larger and more congested. The operation was conducted precisely in the same manner as in the second case; here, however, either from the congestion being great, or the division a little too sudden, the hæmorrhage required the tying of a vessel, which latter was so large that the cautery applied to it could not control the bleeding.

Mr. Marshall took occasion to remark to the pupils that these were tentative operations, and that further trials would be necessary to ascertain in what cases this peculiar mode of simultaneous excision and cauterization was to be used. It was certainly the neatest and most elegant manner of using the actual cautery that had yet been devised. He was inclined to think that the chance of hæmorrhage would be much lessened if the wire were somewhat thicker than the one he had just used. Mr. Marshall fixed such a wire to the conductors, and when the circuit was completed, it became red hot, but in a little longer time than the other had taken. Mr. Marshall thought that the method just described would eventually be peculiarly applicable to fibrous tumours of the uterus, and he stated that he is having a battery constructed, where the cells would be managed in such a manner as to be quite ready for use by being dipped into the diluted acid; that the apparatus might then be put entirely out of the patient's sight by being placed under a seat or sofa, and that nothing but the conductors need be seen.

Mr. Marshall, subsequently to the operations, placed a dog under the influence of chloroform, and slowly divided the tongue half across with the platinum wire, without causing hæmorrhage. This experiment went far to show that the thicker wire which was used in this instance would hold out a reasonable chance of dividing and cauterizing without any loss of blood. We should mention that Mr. Marshall first used the galvanic force in the manner above described, in a

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very obstinate case of fistulous opening in the cheek of a young man, which had refused to cicatrize under every imaginable kind of treatment. As the tract was about one inch and three-quarters long, and somewhat sinuous, a wire heated in the usual manner must get almost cold before it reached the whole extent of the tract; this objection was, however, entirely removed by the use of a wire introduced cold, and then heated by the galvanic battery. The success obtained in this latter case, which had almost been despaired of, was the first step in the series of cases which Mr. Marshall has since treated with very favourable results. We subjoin the results of the above described operations:—

Case 1.—*Fistula in ano.* The sloughs began to separate on the second day; on the fourth, the wound was quite clean, the granulations large, and the edges already rounded, and beginning to cicatrize. Until the sloughs separated there was some dragging and aching pain, which, however, was not at all to be compared to the suffering after the division of fistula by the knife, an operation which the patient had himself previously undergone. On the second and third nights, an anodyne was given, owing to some restlessness, but the draught was not repeated afterwards. A little tenderness was noticed in the groin on the third day, but this passed off after a few hours. In other respects, the patient made a steady recovery; in three weeks, the bottom of the wound only remained uncicatrized, and now the fistulous tract is quite healed up.

Case 2.—*Hæmorrhoids.* The affection was here of twelve years standing; the patient had had a great deal of pain and inflammation, as well as attacks of hæmorrhage. The final separation of the sloughs took place in passing a motion on the sixth day, accompanied with severe but transient pain, and a slight oozing of blood. After this, he was quite easy. On the eighth day the patient sat up, and on the tenth, he resumed his work as a saddler at home.

Case 3.—*Hæmorrhoids.* This case was of fifteen years' standing; and the patient had frequently suffered from severe inflammation, and had had great losses of blood. He had aching pain at intervals for five days after the operation, as well as some tenderness in the groins. A portion of loose integument not removed in the operation, also swelled and became tender. The patient had severe fits of flatulence, which were generally very painful, lasted about a quarter of an hour, and then disappeared suddenly. On the third day he evacuated some clots of blood from the bowel; on the fifth, a fœtid mass of small size came away, and he was afterwards free from all pain, except in the swollen piece of loose skin, but in two or three days the pain subsided, and on the sixteenth day he went out to work as a painter.

LONDON HOSPITAL.

Hydatid Cyst in the Parietes of the Abdomen.

(Under the care of Mr. Adams.)

A very common deviation from normal nutrition is the formation of cysts containing a clear fluid, some of these being nothing but serous bags generated in the intimate texture of certain organs, others possessing a distinct existence, and classed by pathologists among the entozoa, under the name of hydatids. The presence of the latter in the brain, lungs, liver, kidneys or other viscera of the abdomen, is very often observed, and these parasites come so frequently under the cognizance of the physician, that the possibility of their existence in the various kinds of swelling which it is incumbent for him to diagnose, is always taken into consideration. We lately reported a case, under the care of Mr. Hilton, at Guy's Hospital, which afforded a good example of the disease, as occurring in the liver. Indeed, so many as four such cases have been treated by Mr. Hilton within the last few years, in each of which the tumour had not yet formed connexions with the parieties of the abdomen. In all these, an incision was made into the abdominal walls, and the sac emptied of its parasitic contents. Two of the patients recovered, the two others died. No pathognomonic signs of the occurrence of hydatids have been yet thoroughly made out; such an advance would certainly be useful in a scientific point of view, and the knowledge of the existence of hydatids in a given swelling might have a great influence on practice.

The treatment of hydatids falls more frequently to the share of the physician than that of the surgeon, if we except such cases where the development of these entozoa in bony structure is made out; nor is this the only exception, for it would appear that hydatids may likewise take their origin in the interstices of the fibres of certain muscles. We lately saw a patient under the care of Mr. Adams, who presented a good example of such a parasite slowly growing and developing in the muscles of the abdomen; and this circumstance will at once bring before the mind of the surgeon acquainted with the difficulties attending the diagnosis of tumours of the abdomen, the obscurity which must necessarily have hung over the present case. The patient was luckily of the male sex—a fact tending materially to simplify the investigation, as will be seen by the following details:—

Henry N., a young man of fair complexion, spare make, and intelligent look, was admitted Nov. 19, 1850, into Baker ward, under the care of Mr. Adams. The patient is twenty years of age, but looks hardly fifteen, and is of the Jewish persuasion. He is seeking advice for a swelling of the left side of the abdomen, which is giving him no pain, and has been growing for the last five years. A little previous to the period just mentioned, patient had perceived a small tumour on the left side of, and a short distance below, the umbilicus; it was then soft and yielding, and gave no pain or uneasiness on pressure. The swelling increased very slowly, and it caused so little inconvenience that the boy did not mention its existence to any one. He was at last alarmed at the size it was attaining, consulted a surgeon, and was advised to repair to the hospital. The patient distinctly states that he is not aware of any blow or injury to the abdomen, nor of any violent strain in that region.

On admission, a tumour was discovered situated on the left side of the abdomen; it extended from the umbilicus round to the spine, and from the floating ribs to very near the pubis. The swelling was soft and yielding to the finger, and at once gave the sensation of fluid; but it was difficult—not to say impossible—to make out whether the tumour was connected with the cavity of the abdomen, or merely situated in its walls. Nor was it easy to determine with what kind of fluid it was filled. The first supposition would of course be, that the accumulation was composed of purulent matter, as psoas abscess does sometimes point above Poupart's ligament; but the time which had elapsed, the absence of pain or inflammation, the very slow growth, and the patient's excellent health, were one and all against abscess.

Mr. Adams ordered a soothing treatment; and after having watched the patient for a few days, a very small trocar was carefully introduced into the tumour; this caused the escape of a small amount of clear, straw-coloured fluid. It was, however, per-

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ceived that the tumour was not being freely emptied. Mr. Adams therefore made a transverse incision through the skin, about two inches long, cut carefully through a thin layer of muscular tissue, and came down upon a hydatist cyst, which was carefully but very easily enucleated. The fluid, to the extent of about two pints, was retained in the sac, and taken out with it. This took place on the 29th of Nov.; and six days afterwards, the wound having been carefully dressed, and pressure applied, union by the first intention had taken place.

The cyst was rather thick, of a pearly-white, and gave the finger the sensation of consolidated albumen; its size was globular, and when distended measured about six inches in diameter. The internal and secreting membrane was perfectly smooth, and somewhat lighter in colour than the external. Dr. Letheby examined the intimate texture of this cyst, and found that the tissue contained nearly nine per cent. of solid substance, which consisted of fatty matter, albumen (soluble and insoluble,) and salts. The liquor secreted by the hydatid contained echinococci, and it furnished twenty-five per cent. of solid residue, formed chiefly by a peculiar kind of albumen, together with alkaline chlorides, phosphates, and sulphates.

The patient did not present any unfavourable symptoms; his health had always been and remained excellent; but it was soon perceived, that in spite of the removal of the parasite, a re-accumulation of fluid was taking place in the same locality. Mr. Adams, being unwilling to subject the patient to a second tapping so soon after the first, advised him to leave the hospital for a little while, and then return, when he would again be placed under treatment.

Towards the middle of January, 1851, the young man presented himself again, with the tumour pretty well of the same size as it had been originally. He remained for some time under observation, and Mr. Adams deemed it prudent to endeavour now to dispel the fluid by means of pressure. This was carefully applied, and the patient, after remaining about one month in the hospital, was discharged, and recommended constantly to wear an ingeniously contrived belt which had been constructed for his use, and which exercised a gentle but steady pressure on the tumour.

Mr. Adams had at one time harboured the idea that some disintegration of the fibres might have occurred in a portion of the abdominal muscles, and that some of the contents of the cavity were being protruded through the fissure, forming a ventral hernia, but no positive opinion could be given on the subject.

WESTMINSTER HOSPITAL.

Elephantiasis of the Leg.

(Under the care of Mr. Holt.)

The forms of disease met with in this country are sufficiently various to make it the work of a man's life to become fully acquainted with them; but we have likewise to study the morbid phenomena peculiar to other climes, as isolated examples of them are now and then brought before us. Elephantiasis Arabum is well-known to be endemic in Barbadoes, Ceylon, Cochin, the Malabar coast, the West Indies, Guiana, &c. &c.; yet modified examples of the disease are sometimes observed in more temperate countries. The cases which occur in the London hospitals, and of which we saw a few, do not in general reach the enormous magnitude which is so common in the West Indies; but they nevertheless prove very slightly amenable to treatment. Patients thus affected are generally in a debilitated state of health, and the accumulation in any particular limb or organ seems to depend in a great measure on a want of power of the absorbent system. Dr. Musgrave thought that the disease should be called "migratory inflammation of the lymphatic system;" and we may remark that in the case which we have this day to bring before our readers, (a case of obstinate enlargement of the leg, much resembling genuine elephantiasis,) the morbid state of the venous system of the part seems to have had a great share in the development of the disease. It is very probable that in many of those chronic enlargements of the neck, breast, abdomen, thigh, and leg, usually called elephantiasis, the venous circulation is more or less at fault.

The patient is a servant girl, twenty-five years of age, of a strong and sanguineous constitution, who was admitted on the 22nd of January, 1851, under the care of Mr. Holt, with elephantiasis of the left leg. She has generally lived very comfortably; the catamenia have always been regular; she was not overworked, and states that no affection of this kind has been noticed in her family. It appears that six years since the patient was treated in St. George's Hospital for ascites, and three years afterwards she was attacked with mesenlated fever, for which she was treated in the Chelsea Infirmary. During this illness the leg and thigh swelled and inflamed considerably, the pain in the whole limb being very great; these symptoms gradually receded as her convalescence approached, and the œdema had almost entirely subsided when she returned home. The patient had the misfortune soon afterwards to bring the shin-bone of the affected leg in violent contact with a hard substance; this accident occasioned much suffering, and she was soon obliged to apply to the hospital. She was admitted about a twelvemonth ago, under the care of Dr. Kingston, and subsequently transferred to Mr. Holt, the case having become a surgical one.

A variety of means were used to allay the constant pain and reduce the œdematous condition of the leg; but these met with little success, the limb was getting denser and larger, and the pain incessant. An incision in front of the tibia, made some months before, never showed any decided tendency to cicatrize, and had yielded but a trifling discharge. The girl left the hospital to try the effect of country air; but having returned with no amendment, Mr. Holt proposed the removal of the limb, to which measure the patient readily consented.

On the day previous to the operation, the diseased leg was about twice the size of the sound one; the bones were so completely covered and surrounded by a dense lardaceous deposit, that they could not be felt; the anterior portion of the limb and the dorsum of the foot were the most distended, to such a degree that the parts could not be made to pit on pressure.

Mr. Holt performed amputation a little below the knee whilst the patient was under the influence of chloroform; and some difficulty was experienced in tying the vessels from the rigid flexion of the knee and the toughness of parts. The girl progressed very favourably, the stump healed in a few weeks, and she is now on the eve of being discharged, a fall on the stump having delayed the complete cicatrization.

The limb was carefully examined a few days after the amputation; the tough and hard portion was found composed of that lardaceous substance which in similar cases has been looked upon as the result of effusion of serum, gradual absorption of the fluid, and deposit of fibrinous matter. The veins of the part, both deep and superficial, were more or less obliterated, the vena-saphena-major being more completely so. It is likely that this patient had had several attacks of phlebitis of the adhesive kind, which at last terminated in the ob-

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lteration of most of the venous trunks of the leg; and hence the continual effusion into the cellular tissue, and the thickening of the limb by the absorption of the watery particles and fibrinous deposits.

It is, however, maintained by some authors that the peculiarity of the disease is that the effused fluid is always coagulated, and that this therefore differs much from ordinary serous effusion. The disease in the present case seems to have been quite localized, and not depending on any constitutional peculiarity or diathesis. In the latter case writers on the disease discountenance the amputation of the enlarged limb, and they assert that the constitutional symptoms after removal of the limb are apt to recur, accompanied with inflammation of some of the viscera, or of an extremity on the other side of the body. We should not omit to mention that M. Bouillaud, Physician to the Charite at Paris, attributes elephantiasis Arabum to the obliteration of veins; but some of his opponents have stated that M. Bouillaud has confounded cause with effect, and that the obliteration of the veins is produced by the same influence which gives rise to the hypertrophy of the whole limb.

ROYAL FREE HOSPITAL.

Tetanus following a Severe Burn.

(Under the care of Mr. THOMAS WAKLEY.)

OUR readers may well imagine that we see many cases of burn, (especially in the winter season,) whilst paying our accustomed visits to the hospitals of London, the majority of these cases having reference to children. It is not our present intention to dwell on the treatment adopted in the various institutions against these accidents: we shall take an early opportunity of alluding to this highly practical subject. We have for the present to draw attention to a case lately under the care of Mr. Thomas Wakley, in which a rather severe burn was followed by tetanus. In consulting our daily experience, and the most approved works on burns, we find that such a complication is not of common occurrence, and we are therefore induced to put the following case upon record.

Francis H——, aged twelve years, was brought to the Royal Free Hospital, December 3, 1850, in a very weak state, having shortly before been severely burned, by his clothes catching fire. On examination, it was found that the greater part of the trunk was severely charred, the boy being, at the same time, in a state of great prostration. The faintness was combated by stimulants, the patient wrapped in cotton-wool, and reaction soon took place. The bowels were kept gently open by mild mercurial purgatives, and the boy progressed very nicely for a few days. A few sloughs now formed, which, when cast off, were followed by the usual amount of suppuration; the pulmonary and intestinal mucous membranes were not affected in an evident manner; there being neither cough nor diarrhœa.

On the seventh day, however, the patient became weak and restless, and the discharge thin and sanious; there was clearly a change for the worse. Ammonia in decoction of bark was prescribed. At three in the afternoon of the same day, symptoms of trismus appeared, and the secretion of pus ceased altogether. The jaws became soon locked to such a degree that the poor boy could not take his food; in six hours' time, the trismus was complete: the muscles of the abdomen were thrown into such rigid spasm, that they felt as hard as board; and the emprosthotonos was so powerful, that the child's face was firmly fixed against his knees. He went on in this distressing state until the next day, when he expired, overcome by the severity of the spasms. Great debility came on before dissolution, and all the symptoms of tetanus had disappeared when death occurred.

It is well known that both the serous and mucous membranes sympathize with the cutaneous surfaces, and that these membranes and the structures peculiar to them suffer more or less in cases of burn. It may therefore be supposed (especially where a young subject is affected) that internal irritation might be the cause of an excitable state of the cord, followed by tetanus. We do not pretend to decide whether the injury done to the skin and cellular tissue by a burn of the third degree would be sufficient, independent of internal irritation, to affect the spinal cord, but it seems the less likely of the two causes. However this may be, the preceding case appears to us to be of importance, in so far as prophylactic measures are concerned, and it will certainly be productive of some good that the possibility of tetanic complication after burns should be kept in mind. The timely administration of sedatives might perhaps in doubtful cases ward off the impending and fearful spasmodic disease.

As to treatment when the tetanic symptoms have fairly set in, it should not be forgotten that favourable results have been obtained by the free administration of the Indian hemp. Professor Miller, of Edinburgh, mentions three cases, in his "Principles of Surgery," in which he gave the cannabis to patients, one of whom was twelve years of age, and the others a little older. They were all severely affected with tetanus, and recovered; it should, however, be added that the remedy has likewise been known to fail. "The treatment consisted of purgatives, cold to the spine, Indian hemp pushed to narcotism, nourishment, and seclusion. It is given in doses of three grains of the extract, or thirty drops of the tincture repeated every half hour, hour, or two hours, the object being to produce and maintain narcotism."

SOUTH STAFFORDSHIRE GENERAL HOSPITAL, WOLVERHAMPTON.

Successful Employment of Kosso in two Cases of Tænia Solium.

(Reported by JOHN TOPHAM, M.D., London, Physician to the Hospital.)

THE two following cases afford additional testimony to the efficacy of the brayera anthelmentica as a vermifuge in cases of tape-worm.

As the efficiency of every remedy is greatly dependent upon its freedom from adulteration, I may state that the specimen of kosso employed by me was kindly presented to me by Mr. R. Sandford, surgeon, of Bascharch, who himself procured it, during his residence in Jerusalem, from an Abyssinian merchant.

A scruple and a half of the powdered kosso was infused in four ounces of warm water, allowed to stand for half an hour, and then, having been stirred up with a spoon, the whole was swallowed at once.

A similar dose was given at eleven o'clock the same morning, to each of two young women, both of whom had a short time previously passed portions of tape-worm; and the patients were detained in the hospital for the remainder of the day, in order that the effects of the medicine might be observed, which were, nausea and sensation of thirst, followed by catharsis, and the expulsion of a quantity of tænia solium. In one case, only a few inches of the parasite came away; in the other, some eighteen or twenty feet; and in both instances the *head of the animal was evacuated.*

There had been no previous treatment by cathartics, or other medication.

I had only once previously employed this remedy, in place of the ordinary mixture of turpentine and castor-

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oil, and in this instance the alvine evacuations were by some mistake thrown away, so that no direct evidence of the expulsion of the parasite could be obtained; but the symptoms of which the patient complained have never recurred. The dose then given was half an ounce, but this produced violent purging. The small quantity administered in the other two instances appears to have been quite effectual, and also produced catharsis, as the brayera anthelmentica does when taken in its native locality, by the inhabitants of Abyssinia; who, as my friend Mr. Sandford remarks, in a note which necompani d his present of kosso, "are never without it; and they require a large dose, as they will eat eighteen pounds of raw meat at one meal." But we learn from Johnston's *Travels in Abyssinia*, that the administration of these large quantities is not without its ill effects, for he says,—"Even men have been known after a large dose to have died the same day from its consequences—no civilized stomach could bear the bulk of the drug necessary to produce its effects."

Dr. Pereira states the dose for an adult to be half an ounce, infused for ten minutes in ten ounces of lukewarm water.—(*Pharmaceutical Journal*, July 1, 1850.)

Foreign Department.

Forced Dilatation in Stricture of the Rectum.

M. Dieulofoy advocates, in *L'Union Médicale*, the use of wooden dilators, resembling rolling-pins, with one end somewhat swel ed, to conquer strictures of the rectum. He really does conquer them in a very effective manner, for he forcibly pushes through the stricture with the thick end of the dilator and goes on pushing and tearing with gradually increasing sizes, until he has in two or three sittings destroyed the stricture . . . and the gut.

Case of Poisoning by Laudanum, resulting from a Mistake in a Physician's Prescription.

A case which has caused much sensation among the profession at Paris, was lately tried before the tribunal correctionel. The facts are briefly these:—In October, 1850, a Mr. Labbé, a post-master at Alfort, near Paris, was attended for a severe indi-position, by Dr Deguise, a highly respected practitioner of the French capital. In the course of the treatment, Dr Deguise prescribed an injection with laudanuun, and instead of writing *ten drops*, wrote *ten grammes*. (The gramme is equivalent to about fifteen grains.) The patient was soon afterwards thrown into a comatose state; but by proper treatment was completely roused, and remained quite conscious, and free from narcotic symptoms, for twenty hours. After this period he, however, suddenly grew worse, and died two days after the injection had been administered.

The authorities appointed three commissioners, Messrs. Cruveilhier, Devergie, and Rayer, to investigate the matter. The result of the inquiry was, that the commissioners were of opinion, that the patient had died of a low fever, *complicated* by an overdose of laudanum. The court, not seeing in this answer whether the death had resulted from the imprudence of the medical attendant or not, disregarded the verdict of the commissioners, (without ordering a post-mortem examination,) and put Dr. Deguise on his trial. The most eminent men of the faculty were examined, among whom was Orfila, the points of interest being the quantity of laudanum injected, and the period (twenty hours) during which lucidity had been regained. The medical testimony was mainly in support of the commissioners' opinion, but the court found the accused guilty of *homicide by imprudence*, and fined him four pounds, with costs. The laudanum used was the preparation which goes by the name of Sydenham's laudanum, or compound opium-wine of the Parisian codex. We shall just transcribe its composition: Opium, two ounces; cinnamon and cloves, of each, one drachm; malaga wine, one pound. Twenty drops contain one grain of opium.

Incision of the Vulva as a Preventive Measure against Ruptured Perinæum.

M. Paul Dubois, and lately M. Chailly-Honoré, strongly advocate an oblique incision of about a third of an inch on the vulva by the side of the perinæum, either to prevent altogether the rupture of that region when much distended, or when the rupture is inevitable, to promote it on a spot where it can produce but little mischief. Both the above accoucheurs support their views by successful cases.

Homœopathic Wrath.

A physician attached to one of the Parisian hospitals, and who is practising homœopathy, flew recently into a very great passion with his clinical assistant, as the latter had dared, in the absence of his superior, to prescribe an opium pill in a very urgent case. The disciple of Hahnemann immediately demanded from the director of hospitals that the young man should be removed, but the request was not complied with. When the time came for the signing of the assistant's certificate, (without which the yearly allowance cannot be paid,) the globulist refused to sign, on seeing which the director signified to him, that if the signature were withheld, the young man should be paid out of the physician's salary. The signature was forthwith given! It is really astonishing how the authorities can tacitly sanction the homœopathic delusion to creep into the Parisian hospitals.

Measures for combating Sterility.

We find that Dr. Mistler has published in the *Gazette Médicale de Strasbourg* a method of his, for rendering barren women fertile. The author thinks that an abnormal narrowness of the neck and mouth of the uterus is the principal cause of sterility, and first cauterizes the internal portion of the neck with nitrate of silver, and then proceeds to dilate that canal with cones of prepared sponge, the size of which is gradually increased. Nine women were thus treated, seven of whom bore children after the above means had been persevered in for several months.

Chloroform as a test for the detection of Iodine.

M. Rabourdin has made numerous experiments, which prove that chloroform will detect very small quantities of iodine in those liquids which naturally contain that substance. If we take ten parts of a fluid containing one hundred th usandth part of iodide of potassium, and add to it two drops of nitric acid, fifteen or twenty drops of sulphuric acid, and one part of chloroform, the latter will, by shaking, assume a distinct purple colour. These facts may be of use, but starch is doubtless the most delicate test we possess for the detection of iodine.

South American Cure (?) for Phthisis.

The *Revista Medica di Paraguaya*, a Montevideo periodical, states, that Messrs. Jackson, Brothers, have at last discovered a cure for phthisis. These gentlemen feed large flocks of llamas upon the "fucus iodiferus" (De Humboldt,) and consider that all the chloride of

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sodium naturally existing in the tissues of these animals is, by the ingestion of this plant, changed into *iodide of sodium*, as the latter salt forms eighty per cent. in the above-named plant. In a short time the llama is *saturated* with iodide of sodium, and the milk of the animal then becomes the most appropriate beverage for phthisical patients. The meat, which is, of course, likewise *saturated* with the iodide of sodium, is then hung, and thereby becomes impregnated with various empyreumatic products, as creosote, &c. &c. This smoked meat and the milk are the agents in the cure. Patients are visited at their residence by a llama carrying on her back a piece of hung meat; they are not allowed to take any other food but this meat and the milk just yielded by the llama, and in six months all the symptoms of phthisis have disappeared. The cure is compl ted by a course of gymnastic exercises, and the patients then return home. The poor and the Spaniards in straitened circumstances are treated gratuitously; the *English* pay five thousand piastres (£1250) at the end of the treatment.

Another Cure (?) for Phthisis.

M. Chatroule, of Paris, has lately introduced a machine, by means of which uncombined iodine may be inhaled, and he thinks that phthisis in *all* its stages may, by such inhalations, be arrested. The public at large are making much stir regarding this treatment, but it may be doubted whether the profession will take it up as warmly. What has become of the inhalations of chlorine, of creosote, tar, camphor, &c.? They are forgotten after having in their time done a great deal of—harm. It is very likely that iodine inhalations will fare no better.

Complete Absence of the Uterus.

The *Gazette Médicale* mentions the following case, which shows very forcibly, that we should always, in our attempts at enlarging the vagina, recollect that the uterus may be entirely absent. The patient married at thirty-two, but never menstruated, though she had now and then a discharge from the vagina; the mammæ and the rest of the body were well formed, but she had always been indifferent to coition. The woman died at fifty-seven, of phthisis, the lungs being saturated with tubercles. The labia majora and the clitoris were of full size, but the vagina so narrow that it hardly admitted the index finger; the vaginal canal was only one inch long, and ended in a cul-de-sac, behind which there was not the slightest trace of the uterus. The Fallopian tubes were situated in the broad ligaments, the latter being placed behind the bladder. The ovaries were found under the Fallopian tubes, the former being somewhat hardened, and containing in their interior compact little masses. The uterus was completely wanting, not the least rudiment of the organ being distinguishable.

Incontinence of Urine.

M. Demeaux has published two cases in the *Gazette des Hopitaux*, January, 1851, one of a young man of twenty, the other referring to a girl of eighteen years, in which he succeeded in arresting the uncomfortable flow of urine at night by cauterizing the neck of the bladder with nitrate of silver, using Lallemand's "porte caustique" for the purpose. Various remedies had been tried in both cases, but they had all failed; cauterization, however, removed the symptoms in a very short time.

Artificial Vichy Water.

Bicarbonate of soda, dissolved in water, imitates the Vichy Water very imperfectly. The *Bulletin de Thérapeutique* gives the following formula for the purpose:—Bicarbonate of soda, 75 grains; chloride of sodium, 4 grains; sulphate of soda, 10 grains; sulphate of magnesia, 3 grains; sulphate of iron, one-fifth of a grain. Dissolve in a bottle of water, and use it as the natural Vichy Water. By adding 45 grains of citric acid, the water will effervesce.

On the Hepatic Circulation.

M. Magendie, so long and universally known as one of the most zealous physiological experimentalists of the age, and as a very eloquent professor at the College of France, has for the last few years been relieved from his duties, at the latter institution, by M. Bernard, whose daring spirit of investigation bears much resemblance to that of his master. Our readers are aware that it is M. Bernard who discovered sugar in the healthy liver, and so beautifully showed the true functions of the pancreas. The same physiologist has lately lectured on the circulation of the blood in the liver, on which, like Mr. Jackson in this country, he is inclined to look as existing distinct from the cardiac circulation. We shall just attempt an analysis of these views, as reported in *L'Union Médicale*.

The circulation of the liver, which takes place without either heart or valves, could not proceed, if it were not assisted by two powerful aids—the first being the pressure of the abdominal viscera, the second the venous suction; for the aspiration of the heart acts not only on the venæ cavæ, but likewise on the venæ hepaticæ. When the abdominal pressure ceases, as by the ripping open of the cavity, for instance, a stop is put to the hepatic circulation; in fact, as soon as that pressure ceases the blood retrogrades towards the abdomen; thus persons affected with ascites, and who are being tapped, faint like animals whose abdomen has been cut open.

These two aids would, however, not suffice, owing to the irregularities to which the hepatic circulation is liable. During abstinence, the blood returned by the mesenteric veins passes very easily through the liver; but during digestion the circulation of the veins is more active, from the large amount of matter they take up, and the liver, receiving more blood, would be liable to congestion. M. Bernard has shown that there is a peculiar provision for preventing this engorgement; he has demonstrated that the blood is carried direct from the portal vein into the cava by appropriate vessels, without passing through the capillary system of the liver. These vessels are situated much below the venæ hepaticæ, and where the texture of the liver adheres to the inferior cava. The existence of these veins has been clearly shown in the horse. These vessels, by which the venous blood of the abdomen communicates with the general system, and which may be looked upon as a kind of diverticula, are intended to facilitate the action of the liver, and prevent the engorgement of that organ, which engorgement would interfere with the work of secretion.

But the heart is likewise preserved from congestion by the following phenomena:—The blood, under certain circumstances, after having traversed the liver, does not pass wholly through the heart; it descends again into the inferior cava, after it has left the venæ hepaticæ, and flows into the renal veins. It is, indeed, difficult to conceive, that when a horse which has been kept long without drinking takes from fifteen to eighteen pails of water, the whole of the liquid passes through the heart. Hardly a fifth of it takes that direction, and the other four-fifths take the course just described. This mechanism is to be noticed principally with those animals which take a large amount of food of slight nutritive qualities. Parts are disposed in the following manner in this extra circulation: the portal vein has

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the same coats as the other veins, but its hepatic subdivisions are surrounded by a loose tissue called the "capsule of Glisson," and such a disposition must of course facilitate the passage of the blood; whereas the hepatic veins are closely connected to the substance of the liver, and have an evident muscular texture. The fibres are longitudinal; they thus retract upon themselves, and carry the structure of the liver in the same direction. These veins do not contract, but they become shorter, the object of this action being, to render the circulation more active as the liver gets congested. The muscular structure is especially noticeable in the inferior cava, the muscular parietes of which are almost as strong as that forming the auricles. The contractile fibres begin below the hepatic veins, and terminate immediately above the renal veins.

M. Bernard showed the inferior cava of a horse where the above-named structure seems to constitute another heart, and to be the starting point of another circulation. The vein, in fact, presents pulsations when in the act of driving the blood backwards. In order that the latter, when forced downwards by the contractions of the inferior cava, may enter the renal veins, there are, below the latter, little valves which prevent the blood from entering the iliac veins, the blood being forced to pass through the renal veins, which vessels then assume the characters of arteries. This *hepatico renal* circulation is not constantly going on. When a man is fasting, for instance, the amount of blood reaching the liver is inconsiderable, and it passes altogether through the hepatic veins and the heart. The arterial blood of the kidneys experiences the ordinary pressure, and the renal secretion is limpid, acid, and contains much urea. But things go on differently during a plentiful digestion; for the blood, taking a shorter course, is carried in great quantities to the kidneys, which organs quickly free it from its more finid parts; the urine then increases, becomes dull, alkaline, gives saline precipitates, and very little urea.

The lumbar and azygos veins prevent obstruction in the inferior cava, and are intended for the conveyance of the blood from the lower extremity and the pelvis to the auricles. Birds, fishes, and reptiles, have a renal portal vein, by which a certain quantity of blood passes directly through the kidneys, whilst another quantity passes throug the lungs. Prussiate of potash is eliminated by the urine five minutes after ingestion; but Doering, having introduced this salt in the lower portion of the jugular vein, observed traces of it in the upper part of the same vessel only thirty minutes afterwards. This difference led physiologists to suspect that there must be unknown means of transit for the rapid passage of fluids to the urinary organs, and M. Bernard has the merit of having shown by which vessels this circulation is carried on. We recommend these views of a young and eminent physiologist to the attention of our readers, and sincerely hope that the subject will be thoroughly investigated in this country. The matter is of sufficient importance to deserve attentive consideration. We regret that want of room precludes our giving a sketch of the experiments by which M. Bernard strengthens his theory. It should, however, be noticed, that he concludes his investigations concerning the functions of the liver by endeavouring to prove that the hepatic circulation is one of the causes of the evolution of animal heat.

Problematic Cause and Effect.—Dr. Wützer, of Bonn, has met with two cases, where the father had had syphilitic ulcers on the velum, and the children cleft palate; one child exactly on the spot where his father had a deep citatrix on the velum palati. Dr. Wützer sees cause and effect in these phenomena!

Biographical Sketch

OF

JAMES SYME, ESQ., F.R.S.E.,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

The subject of this memoir was born on Nov. 7th, 1799, being the second of two sons, who were the only children of the late Mr. Syme of Cartmore, the representative of a respectable family in the northern part of Fifeshire. In accordance with the old Scottish system of education, the classical studies of Mr. James Syme were conducted at a public school—the High School of Edinburgh, under the guidance of a private tutor, who resided with his brother and himself in town, and accompanied them to the country during the periods of vacation. This gentleman, now the Rev. Dr. Simpson, of Kirknewton, possessing great talents and varied acquirements, with a very correct taste, no doubt exercised a most beneficial influence over his pupils. The subject of our memoir took little interest in the sports of his companions, and was intimate with only a few chosen associates, being chiefly occupied with pursuits of his own selection. At a very early period he became fond of chemical experiments, and long before leaving the High School, had devoted all his pocket money to the purchase of apparatus for this purpose. At the age of seventeen he accomplished one of the objects which had long engaged his attention, in rendering india rubber applicable to many uses for which it is now employed.

In 1817, having attended the literary classes of the University, together with Botany, Natural History, and Chemistry, (which should always be regarded as preparatory to professional study,) Mr. Syme entered upon his proper medical curriculum, and became a pupil of the late Dr. Barclay, who then was, and had long been, a very popular teacher of anatomy. Mr. Liston, who had been one of his most active assistants, then wished to take charge of a dissecting-room which he had just established for instruction in practical anatomy; but being disappointed in this expectation, he opened an establishment of the same kind on his own account, to which Mr. Syme entered the following spring. Mr. Liston and Syme stood to each other in the relation of third cousins, but had not previously met. The former received his pupil as a relative, offering every assistance in his power to promote his views; and from that time, for seven years, the strictest intimacy and friendship existed between them. Having only a short while before commenced practice, Mr. Liston had then scarcely performed any important operation, so that each case that occurred was to him a subject of the most intense interest and study.

Next winter (1818) Mr. Liston began to lecture on anatomy, and the charge of his dissecting-room, which was attended by between forty and fifty students mostly at an advanced stage of their studies, was confided to Mr. Syme, who, having previously dissected but little of the human body, was obliged to use no small exertion to maintain the character of the demonstrator. In 1820 he was appointed Medical Superintendent of the Fever Hospital, where an attack of the epidemic nearly proved fatal to him; In 1821 he was elected House-surgeon of the Royal Infirmary.

Mr. Liston, who had become tired of teaching anatomy, and wished to lecture on surgery, now offered to resign the anatomical department in favour of Mr. Syme, who, following his example became a member of the College of Surgeons in London, in order that his tickets might afford a qualification for practical anatomy, which then was not required by the Edinburgh boards. Next year he became a fellow of the Edin-

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burgh College of Surgeons, and began to give lectures on anatomy, which proved very successful during that and the following winter; he also performed some operations, especially an amputation at the hip joint, which attracted attention.

Mr. Liston then proposed that they should enter into partnership, and in conformity with this arrangement an apprentice was bound to them in common. But from causes which it is unnecessary to investigate,—and for which Mr. Syme will not probably be held accountable, as the overture for reconciliation came from Mr. Liston,—the friendship which had existed between them was suddenly exchanged for total estrangement.

Mr. Syme was (as he states) then very disagreeably situated, "since Mr. Liston had given great offence to most of the older and established practitioners in Edinburgh, by performing operations upon patients who had been under their care in public or private; and Mr. Syme, however innocently, from his connexion with the former, participated in being an object of hostile feelings, while at the time of his difference with his partner the friends they possessed in common took the side of the latter, as being the older, and regarded the subject of our biography with coldness. Not discouraged, but rather excited, by the feeling of having been unjustly treated, Mr. Syme entered into an arrangement with the late Dr. Mackintosh, who then taught midwifery and the practice of medicine, to lecture along with him. They purchased a house, and converted it into a commodious theatre, with dissecting-rooms and museums. In 1825 Mr. Syme there commenced a course of lectures on anatomy and another on surgery; but finding great difficulty in procuring subjects for dissection, about the middle of that session made over the anatomical department to the late Dr. Cullen, and devoted his whole attention to surgery, with rapidly increasing classes, so that in 1829 he entered above 250 pupils, and maintained this number during the two following years, although Messrs. Turner, Liston, Lizars, and Fergusson, were lecturing on the same subject.

Mr. Syme then became very desirous of being appointed one of the surgeons of the Royal Infirmary, but he was assured by an influential manager, that so long as Mr. Liston, who had been recently elected, remained in the establishment, regard for its peace would ensure his exclusion. Thus thrown on his own resources, he took a lease of Minto House, fitted it up for the reception of patients, and requested the College of Surgeons to recognise it for hospital attendance. The college declined to do this, but, at the suggestion of the late Dr. Kelly, of Leith, agreed to recognise a course of clinical lectures, if Mr. Syme chose to deliver one. They, however, restricted the number of pupils to forty, and the professor of clinical surgery, Mr. Russell, insisted upon the same fee being charged as for his lectures. Mr. Syme accepted these restrictions, and delivered eight courses of lectures during four years, with the full complement of students at each. The proceeds went to support the hospital, which derived about the same amount from public contributions, and still left a considerable deficit for Mr. Syme to supply.

In 1831, Government instituted a Chair of Surgery, in the University of Edinburgh, and appointed to it Mr. Turner, who had succeeded Dr. Thomson as Professor of Surgery to the College of Surgeons. An effort was then made to abolish the latter-named chair, which had no privilege attached to it, and seemed unnecessary after the establishment of another in the University. The friends of Mr. Syme resisted this, while all the other teachers of surgery—to wit, Messrs. Liston, Lizars, and Fergusson, and their friends, with the friends of Mr. Turner—voted for abolition; but as two-thirds of the College were required to vote for the accomplishment of this, Mr. Syme's friends proved sufficiently numerous to maintain the chair. When, however, the election came on, all the members desirous of its abolition, for reasons which may be surmised, united in support of another candidate, and either by giving their votes to him, or withholding them from Mr. Syme, carried the election of his opponent by one vote

In 1832, the compulsory attendance which then began to be enforced upon the recently appointed professor of surgery (Mr. Turner) threatened to affect severely the extra-academic teachers, and the subject of our memoir became a candidate for the chair of clinical surgery, which Mr. Russell, then eighty-three years of age, had obtained permission from the Crown to resign, on the condition of his successor paying him £300 a year. By the recommendation of the late Lord Jeffrey, then Lord Advocate of Scotland, Mr. Syme received this appointment in March, 1833.

Mr. Liston had long looked forward to this chair as the only means of maintaining a permanent connexion with the Royal Infirmary, his appointment of ordinary surgeon being only for the limited period of a few years. His time of service having nearly expired at the date of Professor Syme's election, he had the prospect of being soon superseded in the hospital, to which Mr Syme at once obtained admission, through invitation of the managers, in order that the students, who were all obliged to attend his lectures as a qualification for graduating, might not follow him elsewhere. Mr. Liston therefore turned his views to London as a field of practice, he came to this metropolis in the following year, (1834;) and in 1840 Mr. Syme very unexpectedly received a letter from him, proposing a reconciliation, and expressing a hope that "old sores might not be merely plastered up, but be soundly cicatrized." Professor Syme readily accepted this offer, and, with one short interval, ever afterwards, maintained a constant correspondence with Mr. Liston, until the time of his death. The interval alluded to was occasioned by the injudicious interference of a quondam Edinburgh friend, who published some remarks in regard to the unpleasant subject of Professor Syme's appointment to the clinical chair. But this estrangement also was ended by Mr. Liston, who called upon Mr. Syme when he happened to be in London, and expressed his desire that "they should be as before." At his last visit to Scotland, (September, 1847,) Mr. Liston dined on the first and last day in the house of his relative and former colleague, and it then seemed as if neither of them had anything more to wish for. They were the only two regularly appointed Professors of Clinical Surgery in Great Britain; they had each an ample field of exertion, and possessed an adequate share of all that is usually held requisite to render life comfortable. A few short weeks produced changes little anticipated, and which well showed the vanity of human expectations.

The sudden and unexpected intelligence of Mr. Liston's fatal illness, (November, 1847,) it may well be supposed, made a great sensation in Edinburgh; and while still bewildered by the consideration of this sad event, Professor Syme was strongly pressed to take his place in University College. On looking back now to the many advantages of his position in the northern capital, it may seem surprising that he should have listened to these suggestions; but it must at the same time be admitted that the temptation offered was of no ordinary kind.

"Of all the inducements which weighed with me," remarks Mr. Syme, "certainly the most cogent was a persuasion, that in the event of going to London, I should have it in my power to introduce a method of instruction, which, though not new in name, had never, so far as I could learn, been conducted there in the

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way found so useful in Edinburgh, and which, I felt assured, if generally adopted, must produce the most important effects in the improvement of professional education. I explained, in writing, to the negotiators in London, that, having always advised Mr. Liston against exhausting his energies, by undertaking the drudgery of systematic or elementary lectures, I felt, on my own account, equally averse to doing so, and must be distinctly exempted from any responsibility in conducting the systematic course of surgery. I was led to believe that the professors of University College regarded my appointment as likely to benefit the institution, and I ventured to hope that the sacrifice which I should have to make in relinquishing a chair yielding £600 a year, with a salary of £100 a year from the Crown, in exchange for one of which the whole amount of proffered annual stipend was £150, would induce all who felt interested in the prosperity of the school, to dismiss any private or personal feeling of dissatisfaction at the election of a stranger, especially considering my old and intimate connection with the man whose loss they so much deplored. Having been always a "pure" surgeon, in the strictest sense of the term, I also expected to meet with a fraternal reception by the Council of the College of Surgeons, to which body my standing, as a fellow, (1821,) would give me a claim for admission at the first vacancy."

As the time approached for Professor Syme's departure from Edinburgh, he was asked to dine with upwards of a hundred professional friends, who assembled from town and country thus to express their regard. It was upon this occasion, Professor Syme asserts, that he first felt some uneasy misgivings as to the prudence of the step about to be taken, and that when he heard his oldest and most esteemed friend, Dr. Christison, who occupied the chair, express the sentiments which forty years of intimate friendship had so well taught Mr. Syme that he truly entertained, together with the cordial responses of so many respected voices, he could not refrain from asking himself, where was the necessity, or, rather, the justification, for leaving so much certain happiness for what at best could be considered only as doubtful.

On the 13th of February, 1848, Professor Syme proceeded to London, where he had taken the lease of a large house in the best situation, and provided it with every requisite for the permanent establishment of himself and family. Upon visiting University College Hospital, and desiring to see the theatre where his instructions were to be delivered, he was shown into one which, as he states, "strongly suggested the idea of a bear pit, in the Zoological Gardens." Around the well-like area there ran an iron railing, which he was told Mr. Liston had erected, to keep 'the men' in their proper place—namely, between the ranges of concentric rails, devoid of seating, which occupied the remaining part of the room. We proceed in *verbis ipsissimis* of the subject of our memoir. "Preferring moral to physical force, I requested that the iron barrier might be removed, and that such seats as the narrow spaces permitted might be provided. Having got matters thus far arranged, I intimated the commencement of my lecture, but upon going into the theatre, was surprised to find the gentlemen present, disdainful of my newly provided seats, perched upon the rails in all sorts of grotesque attitudes. As none of my colleagues or other officials were present, I felt a little perplexed, from not wishing that my first words should partake of censure, but at the same time being resolved not—or rather unable—to address as gentleman seriously engaged in professional study, an audience so very peculiarly situated, I stated that an essential step to our further progress must be—descending from their elevation, and taking quiet possession of the seats provided for them. A ready compliance was yielded to this request, and from that time forwards the class I had the pleasure and honour of addressing was never in my experience surpassed, for zeal, intelligence, and decorum. Soon after my arrival in London, a deputation of students brought me a congratulatory address with nearly 200 signatures, and when circumstances afterwards led me to resign the Chair of Clinical Surgery, another deputation was sent to ask if a requisition signed by every student attending the College would induce me to remain. So far, therefore, as the conduct of the students of University College to me is concerned, I had every reason to be satisfied with my new position."

It is needless now to explain particularly the causes of distraction, which must be fresh in the recollection of every one who takes any interest in the history of University College. Suffice it to say, that Mr. Syme was hardly established in London before the Council communicated to him that the exigencies of the School required his services as Professor of Systematic as well as of Clinical Surgery, and that they must look to him for discharging the duties of both Chairs. Professor Syme felt that compliance with the proposal would condemn him to a life of drudgery, and wear out the years which remained for active exertion, in a painful conflict between the calls of public and private duty, utterly inconsistent with that domestic happiness and social enjoyment which he had been accustomed to regard as the best objects of ambition. In these circumstances, feeling that the Council, by their invitation to the Chair of Clinical Surgery, had placed him—and that by remaining in it he should place them—in a false position, Professor Syme at once resolved to resign his appointment at University College Hospital; and he did so on the 10th of May, 1849. It was then to be determined whether he should continue to practise in London or return to Edinburgh. The Chair which he had vacated was still unoccupied, and none of the general practitioners whose views were under-stood to be directed to the practice of surgery had taken the opportunity afforded by his retirement, for embracing the purely surgical vocation; in which case, (says Professor Syme,) "no consideration would have induced me to return, since there would then have been good reason for complaining that, after leading them to re-ign their means of livelihood, I had reappeared as a rival for possession of the field upon which I had induced them to enter. On the other hand, what I had seen and experienced of London medical life was not very encouraging to the sacrifice of happiness and comfort obtainable elsewhere; since, however different the case may be in regard to other classes of society, there can be no doubt that, to a professional man,—and the more so in proportion to his success,—the great metropolis affords a dreary field for exertion, admitting few gleams of domestic or social enjoyment, and hardly yielding any fruit but money, which, when thus gathered as the sole object of ambition, is too apt to harden the heart and chill the affections. It was therefore with no feeling of regret that, on the 3rd of July, 1848, I bade adieu to London, and returned to Edinburgh, where the unceasing kindness of my friends has made me every day more and more thankful for the decision which restored me to their society."

Mr. Syme's first separate publication was "a Treatise on the Excision of Diseased Joints," which appeared in 1831. The objects of this work were to determine, more precisely than had previously been done, as to its seat and extent, the obstacle to recovery, in cases of incurable articular disease; and to show, that, in certain situations, this obstacle, which he believed to be caries of the bones, might be removed without amputation of the limb affected. Excision of the whole carious portion he maintained to be impracticable in the hip-joint and

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wrist-joint; practicable, but not expedient, in the knee and ankle joints; and not only practicable, but extremely beneficial, in those of the shoulder and elbow. The anticipated advantages of the operation, he was subsequently assured, were limited to the latter of these articulations. In 1827, when his first case occurred, the operation of excising the elbow-joint had never been performed on the living subject in Great Britain. When the treatise was published (1831) he had operated fourteen times, and he has now had the experience of nearly eighty cases, which, by their results, have induced so many members of the profession to follow his example, that it would be difficult to calculate what number of her Majesty's subjects have thus been saved from amputation.

In 1832, Mr. Syme published his "Principles of Surgery," which was originally intended to be a text-book for the students attending his systematic lectures on surgery, but in the subsequent editions became so developed as to constitute an independent source of instruction. The author's object was not to collect all that had been or might be said, in regard to each particular subject, but rather to select and arrange in proper order, the facts and opinions which might truly be considered the *principles* of sound practice. As, in guiding to any object, a complicated series of minute instructions for all the turnings and windings of the way is not so useful as some general idea of the distance and direction, no vain attempt has been made to obviate the difficulties of practice by highly-coloured portraits of particular cases, but the greatest care has been taken by careful recollection of personal experience, and anxious inquiry into that of others, to lay down a chart which might be trustworthy for showing the proper course, and pointing out the dangers to be avoided. When the importance of early impressions, in determining the cast of professional character, is considered, it must be admitted that the systematic work first put into the hands of the student is not a matter of indifference, and that the standing of its author as a teacher and practical surgeon should be taken into account, as well as the quality of its paper and printing, and even the opinion of some friendly reviewer. When Mr. Syme ceased to teach systematic surgery, he had for several years lectured to the largest class of surgical students in Scotland, the attendance of his pupils being entirely voluntary. As, in those days, the systems of Bell, and Allan, and the "First Lines" of Mr. Samuel Cooper, were the only elementary books of reference for surgical students, and Mr. Syme was asked to write one for their use, and he accordingly did so,—thus leaving on record the substance of his instructions, together with the alterations which had then been introduced into the practice of surgery.

It may be here remarked, that the views of inflammation given in this work, which are the same with those originally taught by Mr. Syme in his lectures so far back as 1825, are very different from those generally entertained at that time. Instead of attributing this morbid condition merely to an alteration in the capacity of the capillaries, which seemed to him altogether inadequate to account for any of the really important changes concerned, he supposed that there must be a disturbance in the vital power of the part, from the derangement of its functional and nutritive actions, and to this he referred the altered state of circulation not as its cause, but as one of the effects produced by it. In illustration of this view, he repeated every session, before his class, the curious experiments of Rensand Dutrochet, which proved that fluids might be moved by a force different from that of mechanical power, inasmuch as the galvanic influence could induce water, not only to pass through a mass of clay and a thick membrane, but afterwards to ascend a tube in opposition to its gravity. These lessons having been addressed to many gentlemen, since eminently distinguished in the science and practice of their profession, may have had some share in leading to the pathological opinions of more recent date.

In 1838, Mr. Syme published a treatise on "Diseases of the Rectum," of which a second edition appeared in 1846. The objects of this work were, in the first place, to give a connected and intelligible account of these disorders, which, notwithstanding their frequency and importance, were not in general well understood by the profession, and still remained a prey for the deceitful arts of advertising quacks and dishonest practitioners; and, secondly, to explain various improvements in their respective modes of treatment, which had partly originated with the author, and partly been adopted by him from the practice of others, whose writings had not received adequate attention in this country.

In regard to fistula in ano, he enforced the great importance of M. Ribes' observation as to the fixed position and constant presence of the internal opening, with his practical deduction of limiting the incision to this extent, so as to lessen the severity of the operation, free it from all danger of hæmorrhage, and render its result more secure. But, in opposition to M. Ribes, he contended that the disease did not originate from ulceration of the mucous membrane, and was always preceded by the formation of an abscess in close connexion with the lining of the bowel, through which an opening very seldom took place until after the establishment of an external aperture.

For the treatment of internal hæmorrhoids, which had been no less shunned by practitioners than dreaded by patients, an account of the inflammation and hæmorrhage anticipated from tying and cutting, he showed that complete relief might be afforded easily, safely, and securely, by a proper application of the ligature. He also showed that the disease named prolapsus ani depends almost always upon the last mentioned disease, and may consequently be remedied by the same means.

He particularly directed attention to fissure of the anus, which, though well described by Boyer, had almost entirely escaped observation in this country; but, instead of maintaining the necessity of dividing the sphincter, which was and still is alleged and practised on the Continent for the remedy of this troublesome ailment, he established the fact that a simple incision through the sore is sufficient for the patient's relief. He also, for the first time, described, with relation to their symptoms and remedy, spasmodic stricture of the anus and vascular polypus of the rectum.

In 1847 Mr. Syme published a volume under the title of "Contributions to the Pathology and Practice of Surgery."

In 1849, he published a "Treatise on Stricture of the Urethra, and Fistula in Perineo," with the view of explaining the true pathology of the latter disease, and recommending a mode of treatment which he had found very useful in certain conditions of the former. All practitioners of experience must occasionally have met with cases of stricture, which not only resisted dilatation in every mode in which it has been employed, but in the struggle between their contractile disposition and the efforts to counteract it, were apt to cause the most serious local and constitutional disturbance. It was for the remedy of such justly-dreaded cases, that Mr. Syme proposed division of the stricture by incision upon a grooved director passed through the contracted part of the canal; and, considering the importance of the object, any proposal for accomplishing it, especially if emanating from a practical source, might have been expected to meet with a civil reception, until time and opportunity were afforded for ascertaining its merits.

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But instead of this, a storm of abuse, more indicative of personal animosity than professional zeal, burst forth upon the devoted author, who, neither dismayed nor disconcerted, has continued to pur-ue the course which he believed conducive to the interest of his patients and the credit of surgery. During the last twelve months he has felt it his duty to notice the various objections which have been brought forward; but for the future, we understand that it is his intention to be satisfied with publishing the results of his practice, which continue to be, as he asserts, in the highest degree satisfactory.

Of Mr. Syme's "opera minora" the following may be noticed:—

1. *Incised Wounds.*—In 1827, Mr Syme published an essay with the view of pointing out the inexpediency of sealing together the lips of wounds immediately after their infliction, as was then the practice, which he endeavoured to show tended to prevent the adhesive process by accumulating more or less blood in the cavity, so as to separate the surfaces required to unite. Instead of this method, he recommended that the wound should either not be dressed until the bleeding had ceased, or else be covered by materials of such a permeable nature as would allow the issue of fluids. For many years past he has used sponges of adequate size, as the most efficient means for accomplishing this purpose. As the credit of introducing this mode of treatment, so important for the promotion of union by the first intention, has been erroneously attributed to other sources, we may here refer to the publication which, in Edinburgh at least, undoubtedly led to its adoption.—*Edinburgh Medical and Surgical Journal*, 1827.

2. *Actual Cautery.*—Mr. Syme, we believe, was the first surgeon in Great Britain who employed the actual cautery for the purpose of counter-irritation. He also pointed out the particular sort of articular disease which resists other remedies, and yields to this process.

3. *Blistering for the Treatment of Callous Ulcers.*—In 1830, Mr. Syme introduced the use of blisters for the remedy of indolent ulcers, instead of the strapping and bandaging previously practiced, as a much more easy, speedy, and effectual mode of affording relief than those or any others that had been employed.

4. *Formation of New Bone.*—On the 6th of March, 1837, Mr. Syme read a paper to the Royal Society of Edinburgh, on the formation of new bone, and proved to the conviction of every unprejudiced mind, by the results of observations and experiments, that the periosteum is the principal matrix of ossification. With reference to these experiments, Mr. Stanley, in his recently published work, says, "Experiments similar to the foregoing, and with the same results, had previously been made by Mr. Syme of Edinburgh, to whom, therefore, the merit of suggesting them belongs," (p. 102.)

5. *Gangrena Senilis.*—In 1840, while the invariable practice in this country was to stimulate patients labouring under the mortification of advanced age, and practitioners of the highest character, such as Sir Benjamin Brodie, still advocated that treatment. (Surgical Lectures, 1846, p 367.) Mr. Syme established the principle now admitted, that as the disease depends upon weakness which cannot be removed by local or general means, the object of treatment should be protection of the part and system from everything calculated to increase or maintain excited action, and that therefore, instead of a "nutritious diet," "with ale wine, and brandy," the patient should be restricted to milk and farinaceous food Under this treatment, from being one of the most formidable diseases of advanced age, gangrena senilis has become one of the most manageable.

6. *Aneurism.*—Mr. Syme has strenuously maintained the principles established by Dr. Jones and others, in the early part of the present century, with regard to the safest mode of obstructing arterial trunks, contending against blunt knives and broad ligatures, and advocating a clean dissection merely to the extent requisite for applying a single silk thread. He has tied the subclavian artery twice, with success, for aneurism, the humoral eight times, and the femoral nineteen times, without any bad effects from the operation. He has performed amputation at the shoulder-joint twice, with success, for aneurism, not admitting of any other remedy. He has opposed the revival of pressure for the treatment of popliteal aneurism.

7. *Amputation.*—Mr. Syme has performed the only amputation at the hip-joint which, in Scotland, has terminated in the patient's permanent recovery. He was, we believe, the first surgeon in Great Britain who performed Chopart's partial amputation of the foot; and he has introduced a mode of amputating at the ankle joint, of his own contrivance, which may now be regarded as one of the best established operations in surgery. He has also shown, that in amputating below the knee, it is not necessary in order to preserve the use of the joint, to divide the tibia lower than an inch beyond the attachment of the ligament of the patella.

8. *Excision of the Maxillary Bones.*—Mr. Syme was the first surgeon in Great Britain who excised the superior maxillary bone, and the case in which he did so is the earliest on the records of surgery, (1829.) He has also performed many remarkable operations of a similar kind upon the lower jaw, and in 1828 he removed successfully a tumour, so large, that Mr. Liston, three years before, had declined undertaking the operation.

9. *Wry Neck.*—In 1832, Mr. Syme performed subcutaneous division of the sterno mastoid muscle, for the remedy of wry neck. This was the first operation of the kind in Great Britain, and the second on record.

10. In 1847, Mr Syme removed a tumour of the clavicle success-fully, by disarticulating this bone from the sternum—an operation which had not previously been performed in Great Britain

Were it requisite to prolong this list, we might mention the improvements which Mr. Syme has introduced into the performance of various operations, as restoration of the upper and lower lips, and the treatment of various surgical derangements, such as exostosis of the great toe, in regard to which he showed that complete relief might be afforded without resorting to amputation, as Mr. Liston had recommended; fungus of the testicle, which he found was not only non-malignant, (as Mr. Lawrence had ascertained,) but, instead of requiring removal, admitted of remedy, by covering it with the scrotal integuments; and bursal swelling of the wrist and palm, which had been regarded as nearly incurable but for which he suggested an easy and effectual mode of relief, by dividing the annular ligament.

Mr. Syme has also published two letters upon the subject of medical reform, addressed respectively to Sir James Graham, Bart, and the Lord-Advocate of Scotland. In these publications he has endeavoured to show the inexpediency and impracticability of classifying the medical profession by legislative enactments, and the propriety of allowing all its members to obtain the right of practice on an equal amount of education.

Enough has been stated to prove that Mr. Syme has not obtained his present exalted and distinguished position, as the first surgeon in Scotland, without having sedulously devoted the untiring energies of a powerful and cultivated mind to the arduous duties and responsibilities of the important public offices he has so long and so honourably occupied.

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Reviews and Notices of Books,

AND ALSO

ANALYSES OF PAPERS IN MANUSCRIPT

SENT FOR PUBLICATION IN THE LANCET.

On Articulate Sounds, and on the Causes and Cure of Impediments of Speech. By JOHN BISHOP, F.R.S., F.R.C.S., Member of the Council of the Royal College of Surgeons of England, Consulting Surgeon to the Northern Dispensary, and late Senior Surgeon to the Islington Dispensary, &c., &c. London: Highley. 1841.

WE have often felt it to be a reproach to the profession that an ailment so detrimental to the patient in every business of life, and distressing to all who hear his attempts at speaking as stammering confessedly is, should have received till very recently little or no attention from medical men. It was of necessity, therefore, rather than choice, that the public have been obliged to place themselves in the hands of anybody who proclaimed his ability to effect a cure; and surely we can neither be surprised at the numerous failures of, or find fault with, those would-be-physicians, who at least did their best to fill up the void occasioned by our own neglect.

We have now the satisfaction of bringing under the notice of our readers the brief but comprehensive and philosophical treatise by Mr. Bishop, who seems to have grappled fairly with the difficulties of his subject, and advanced an intelligible theory upon which he has founded a successful practice.

The author divides his subject into two parts:—

"The first part of this work is intended to supply the data necessary for the study of the pathological condition of the organs of articulation. It is shown that the physiology of the subject terminates at that point where the orthöopy begins, and that the boundaries which separate these branches of knowledge are clearly defined."

The other portion of the work is accordingly devoted to the pathology of the articulating organs, with directions for remedying defective articulation.

The treatise opens with some observations on the origin and structure of language, followed by a useful table of definitions, without a clear understanding of which it would be impossible to form even a tolerable notion of the subject; we therefore give it at length:—

"*Vocalized sounds* are those in which the vocal cords are in a state of vibration.

"*Unvocalized sounds* are these in which the vocal cords do not vibrate.

"*Vowels* are sounds generated in the glottis, which pass freely through the mouth, and receive their peculiar distinctive characters in their passage. They form syllables without the aid of a consonant, and may be prolonged indefinitely.

"*Consonants* are sounds which are produced by the partial or total interruption of the vocalized or unvocalized breath by some of the organs of speech, and are therefore called 'Literæ clausæ.'

"*Semi-vowels* are consonants capable of prolongation without the assistance of a vowel.

"*Mutes* are unvocalized consonants, which must be associated with vowels to render them sensible to the ear, and are incapable of prolongation.

"*Semi-mutes* resemble mutes, but are vocal, and capable of slight prolongation.

"*Aspirates* are unvocalized sounds, caused by the breath rushing through the pharynx, or between the tongue and teeth, or lips and teeth.

"*Sibilants* are hissing sounds, caused by the voice or breath passing between the teeth.

"*Nasals* are vocalized sounds passing through the nostrils.

"*Explosives* are sounds produced by condensed air in the vocal tube, when arrested in its passage from the lungs either by the velum, tongue, or lips, on the opening of which valves the air escapes in a gust. Explosives, therefore, cannot be prolonged.

"*Sharps*, called by some hard, are unvocalized consonants, such as p, t, f, k, s, &c.

"*Flats*, called by some soft, are vocalized consonants, as b, v, z, &c.

Mr. Bishop considers that there are ten distinct English vowels—viz.,

Pharyngeal.	*Lingua-palatal.*	*Labial.*
ball	bate	bone
bar	bet	boot
bat	beet	
but	bit	

For ourselves, we confess our inability to distinguish the sound of *a*, in *bar*, from *a*, in *bat*, the apparent shortness of the vowel, in the latter word, depending solely upon the consonant that follows, and the use of the organs of speech, in producing the *a*, being, so far as we can detect, precisely the same in both instances. We would also add a third labial—viz., *bull*, the sound of the *u*, in which is, to our ears, neither that of *but* or *boot*. Passing on, we find a concise survey of the methods by which vowels have been artificially produced, which naturally leads to the question, wherein consists the difference between one vowel sound and another? Two hypotheses are stated:—

"The first is, that the glottis produces the primary, and the *air* in the pharynx, mouth, and nostrils, the secondary or vowel-quality pulsations. The second is, that the glottis produces the primary, and the *membranes* of the pharynx, mouth, and nostrils, produce the secondary pulsations of the air."

We infer that the author rather inclines to the latter hypothesis, for he continues:—

"In taking the second view it must be borne in mind that membranes exert a great influence on vibrating reeds. The researches of M. Savart on this subject are familiar to every one who has studied the acoustics of membranes, and we know by experience, that the breath passing through the glottis is thrown into a certain state of vibration, and reaches the cavity of the mouth, which is already so disposed as to present a proper extent of its own membranes to the action of the breath. By these means the membranes are also made to vibrate, and these latter vibrations, co-existing with the original vibrations of the glottis, may generate the vowel sounds. A peculiar configuration of the mouth and pharynx is at the same time necessary for each vowel; and this is the true criterion by which we are to decide whether two vowel sounds are essentially different, for whenever we pass from one simple vowel to another, the configuration is necessarily changed."

After a pretty full explanation of the way in which the diphthongs and consonants are genera-

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ted, the first part closes with a discussion of the principles upon which alone a universal alphabet can be satisfactorily constructed. In the second part the author brings the conclusions he has drawn in the preceding pages to bear upon the investigation of the causes, and subsequently of the treatment, of stammering and other defects of articulation. We shall probably convey to our readers a better idea of the author's reasoning, by a few extracts, than by any analysis of the contents of this part of the work. For instance—

"To persons acquainted with the physiology of voice and speech, it must be obvious that the abnormal states may be various in their nature, and that, accordingly, their treatment must be equally various: any dogma of there being a single remedy must, therefore, necessarily be incorrect. They may originate in the mental processes, or in those states and conditions of the system which tend to disturb the mental associations and power of volition. Other causes may exist in some peculiar states of the organs of hearing, or in irregular movements of the glottis or of any of the articulating organs; indeed, it is not common to find any two cases precisely similar in reference to cause and effect.

"Independently of voice and speech, the vocal organs are more or less concerned in the functions of respiration, deglutition, and the special senses of hearing, smell, and taste. Owing to the complex apparatus of the vocal organs, difficulties of the most formidable nature present themselves in the study of their physiology and pathology, and it can therefore easily be understood how surgeons may often be mistaken respecting the causes and seat of these complaints. A little attention to the action of the vocal apparatus during the act of stammering will, however, soon enable a competent observer to discover whether the affection is entirely of a functional character or dependent on some organic lesion of the parts concerned in the production of articulate language. When it is of the former character, we may easily see the cause of the ill success which has often attended the operations which have been performed for the relief of this defect.

"It has been truly remarked by Sir Charles Bell, that for the production of the most simple sound or the articulation of a single word, the consent of a great number of organs is necessary. Dr. Arnott also observes that command over the organs of speech is acquired in the same manner as over all the muscular organs of the body; as, for example, in walking, skating, fencing, and performing on musical instruments.—Agreeably to this view, it will be found, on analysis, that want of synchronous and appropriate action of each part of the vocal mechanism concerned in speech is essentially and fundamentally the cause of stammering. The most common cases of stammering occur when persons attempt to articulate the desired sounds without putting the glottis into vibratory action; and therefore, in order to remove this kind of impediment, the treatment consists in instructing and exercising the patient in the method of using the vocal apparatus properly. To effect this purpose it is necessary to direct the patient to vocalize the breath so as to utter a continuous sound, as by singing a note in music. This he should do, in the first place, without making any attempt to articulate a syllable; and then, on repeating the same sound, should endeavour to articulate the word required. This he will be enabled to do immediately if, during the whole time, the attempt is made to pronounce the articulate sounds; the glottis is kept in action by the vocalization of the air issuing from the lungs, and the articulating apparatus performs the necessary actions. In this manner the patient will be enabled to overcome on the first trial some of the difficulties of articulating at will."

"On careful investigation, it will be found that the interruptions of vocalized breath in stammering may take place by the irregular actions of four different sets of organs: 1st, by the closing of the valve of the glottis; 2nd, by the closing of the isthmus of the fauces; 3rd, by the dorsum of the tongue being brought into contact with the palate; 4th, by the closing of the lips and posterior nares. In the first case the air is condensed in the trachea; in the second, the same effect takes place in the vocal tube, posteriorly to the isthmus of the fauces. When the glottis is irregularly closed during speech, the articulation of all the vocal sounds is prevented. A prolonged closing of the isthmus of the fauces necessarily obstructs the pronunciation of those letters and syllables which begin with gutturals, as *king*, *good*, &c. The involuntary or misdirected action of the tongue affects the series of lingua-dentals, lingua-palatals, and lingua-palato-nasals, and therefore words and syllables beginning with these letters. That of the lips not only affects the labials, but may likewise impair the pronunciation of all the other letters. By listening to the manner in which the breath is suppressed or suffered to escape, the ear of any experienced person may easily detect, without ocular inspection, whether it is the valve of the glottis or of the isthmus of the fauces which is instrumental in producing the interruption. The same observation will enable him to discriminate the effect produced when the sounding column of air is stopped by the tip of the tongue. When the lips are the cause of the interruption, we have ocular demonstration to assist us in distinguishing the organs which are instrumental in causing the defect."

Had space permitted, we should have willingly made further citations, especially upon the influence which the mental emotions exert over the powers of speech; and, in conclusion, we must express our full concurrence with Mr. Bishop, in reprobating the use of the knife in the great majority of cases. Whilst recommending this treatise to the profession at large, we ought at the same time to warn each person who may take it up, that a hasty perusal will neither benefit himself nor do justice to the author If he would master the subject, he must read it again and again; he must endeavour to realize, by experiments on himself and others, the varied and often delicate phenomena so carefully described in the work; and then, though not till then, may he hope to turn his labour to good account in the successful treatment of stammering.

Phthisis and the Stethoscope: a Concise Practical Guide to the Physical Diagnosis of Consumption. By Richard Payne Cotton, M.D. 12mo, pp. 97. London. 1851.

A Great book has been said to be a "great evil," but it is quite possible that a little one may be entitled to the same designation. It is so when a subject of importance is inadequately treated, as in the small volume with the big title now lying before us. "Phthisis and the Stethoscope" mean much; and under either head the inquiring pathologist and practical physician, with the opportunities afforded by the Brompton Hospital, might have contributed a great deal to our knowledge of the

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pathology and diagnosis of pulmonary consumption. We are, however, disappointed in finding that the author almost entirely limits his attention to giving a summary of what has been previously written by others on the diagnosis of the disease; or when he occasionally ventures to express his own opinions, these are not such as to obtain very general assent or attention. For example, in considering the diagnosis of the early stages of phthisis, he presumes to say,—

"No information can be gained by watching the movements of the chest, as the thoracic walls, from long habit, are pretty equally expanded, although perhaps one lung may have rather less power of distention than the other." p. 19.

Setting aside the inaccuracy of the statement, and the impropriety of assigning an active "power of distention" to the lungs, it is manifestly absurd; for if the lungs do not follow the movements of the walls of the chest, a vacuum must be produced, or the space must be filled with something unaccounted for.

If the Hospital for Consumption at Brompton is to retain the character of being a field for scientific inquiry, which was given to it by its first medical report, something better than "Phthisis and the Stethoscope" must emanate from its medical officers.

Observations on the Epidemic Ophthalmia. By W. R. Wilde, F.R.C.S.I. 8vo, pp. 28. Dublin: M'Glashen. 1851.

The appalling destitution which prevailed in Ireland for three or four years, and which happily has now considerably abated, sent thousands on thousands of famished human beings into its workhouses, and their supplementary establishments, called "auxiliaries." The poor creatures crowded in these buildings—in many instances never intended as dwellings for men and women—became the prey of a variety of fatal and distressing maladies. One of the most severe of the latter class appears to have been an epidemic ophthalmia, which in many instances left its victims hopelessly blind. The attention of the Poor-law Commissioners being naturally called to the subject, they directed Mr. Wilde, whose reputation as an ophthalmic surgeon pointed to his fitness for the duty, to proceed to the Athlone and Tipperary unions to inquire into the nature and causes of the malady, and, if possible, to suggest remedies for arresting its progress. The memoir before us is the result of this inquiry, and appears to be an extension of a report presented to the commission.

Mr. Wilde describes the disease as being a modified form of the Egyptian ophthalmia. He regards it as contagious, and shows its origin as intimately connected with the wretched hygienic condition of the sufferers. He describes how the disease is to be arrested by improving this condition, by classifying the patients, and by a steady perseverance in the use of the therapentical means which he indicates. The means suggested having, it appears, been successful, Mr. Wilde has the happy consciousness of having aided in alleviating much suffering, and we gladly give him the credit of having produced a very interesting report, which we recommend to the notice of our readers.

On Excision of the Os Calcis. A Paper read to the Medical Society of University College, London. By H. M. Greenhow, Esq. Fcap. pp 13. The Lancet Office.

Operation on the ankle-joint is a subject which at the present time bears much interest in the minds of surgeons. The cases narrated by Mr. Greenhow afford proofs of the advancement of surgery. All terminated successfully, though difficulties arose, to be contended with in the after treatment, which rendered their happy conclusion proofs of the operator's skill.

"Case 1.—Henry H——, aged 20, pitman, admitted into the Newcastle Infirmary, June 15, 1848. Eight weeks previous, he had received a wound from a nail running into the left heel. Abscesses had formed and been opened, one of which continues to discharge. The integuments are much swollen and indurated, and fluctuation is felt below the outer ankle. The joint admits of easy motion without pain Abscess opened and poultice applied. As the constitution was deranged, and the nights sleepless, opiates and other suitable remedies were prescribed.

On August 15th the operation was performed.

22nd.—Erysipelatous inflammation extending to the knee; wound sloughy; the ligatures have come away; feverish, with slight delirium at night.

28th.—Deep-seated abscess in calf detected, and opened; wound improving, though there were much fever and other disturbance.

Dec. 1.—The wounds were all healed, and he could bear some weight on the heel. A piece of cork was fitted, to fill up the space in the shoe, and on the 29th he left the hospital quite well, and able to walk with only a slight halt.

The treatment throughout, in this case, was that which is ordinarily employed in cases of erysipelas after operations in hospitals.

Case 2.—Thos. B——, aged twenty-nine, pitman, admitted into the Newcastle Infirmary, August 10, 1848, with disease of the left foot, principally affecting the os calcis, which can be felt through two fistulous ulcers. The disease commenced two years and a half ago, with inflammation and abscess. He was a patient in the hospital some months ago, and underwent an operation for the partial removal of the bone, which proved of little use. The general health is not materially affected.

On the 15th the bone was exposed by suitable incisions, and diseased portions were removed in the ordinary manner.

In about a fortnight the wound was nearly healed, when inflammation took place, and an abscess formed on the outer ankle. He became feverish and disordered, and erysipelas (which prevailed in the hospital) extended to the knee.

Sept. 8th.—A large abscess on the top of the foot was opened.

12th.—Symptoms had much subsided; the wound was nearly closed, but the os calcis could be distinctly felt with the probe.

Oct. 17th.—The health being greatly improved, the complete excision of the diseased bone was determined on. The operation was performed in the same manner as in the first case, except that no integument was removed. After the operation, slight sloughing of the integuments took place; but during October and November the wound nearly closed, leaving a small open-

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ing at the heel, from which there was a slight discharge In a few weeks this entirely healed.

Feb. 10th.—He left the hospital, the heel being quite sound. A piece of cork filled up the vacancy in the shoe, and he walked freely about on crutches.

Case 3.—John R——, aged sixteen, a country lad, of delicate and scrofulous appearance, admitted into the Newcastle Infirmary, Nov. 30, 1848, with disease of the foot, principally affecting the os calcis, which is greatly enlarged and carious. One or two sinuses at the apex of the heel penetrate deep into the bone; ankle-joint moveable without much pain. The disease began eighteen weeks ago from excoriation of the heel, occasioned by the friction of his shoe.

On December 5th, excision of the os calcis was performed, and diseased portions of the cuneiform bones were sawn off. The posterior tibial artery bled freely, but was secured.

He went on well till Jan. 7th, when he was seized with excessive pain in the hip, &c.; the wound became less healthy.

June 15th.—He left the hospital, the wound being nearly healed, and the hips greatly easier, but so stiff from long-continued disease that they would scarcely admit of any motion whatever. The constitutional treatment was varied and adapted to the symptoms and constitution of the patient. He passed some months in the workhouse at Hexham, his health improving; but although he got about on crutches, the hips remained extremely stiff. The final result of the operation was successful."

With respect to the history of the substitution of excision for amputation at the ankle, the author remarks:—

"The Moreaus were the first surgeons who introduced the operation of removal of the bones of the ankle as a substitute for amputation. They removed the astragalus and ends of the tibia and fibula in two cases, and the patients did well. But none appear to have followed their example till a little more than two years ago. The great surgeons who have published their experiences within the last few years do not encourage the practice of excision of the ankle-bones. Thus we find that Mr. Liston never excised any of these bones, and his opinion of excisions generally is, that 'when the soft parts are much diseased, when the disease is not limited to the articulating surfaces, or when the patient is reduced to a low state by hectic,' they are not admissible. Again it appears that though Mr. Fergusson has performed partial operations on the os calcis with success, yet he has never removed the entire bone. He relates a case, in which he scooped out the whole of its cancellated structure; 'the cavity healed slowly, and ultimately filled up.' Mr. Fergusson's opinion of excisions is, that 'such operations are, under any circumstances, extremely difficult, and in most instances more dangerous to the patient than amputation at the ankle or in the leg.'

"This being the state of opinion with regard to these operations, Mr. Thomas H. Wakley, in 1847, performed his operation of excision of the astragalus and os calcis, and with success. His case was published in The Lancet; and soon after in August, 1848, Mr. Greenhow performed excision of the os calcis, as he believed for the first time. When, however, the report of his first cases appeared, Mr. Hancock made known his case, which had been operated on a short time before, but had turned out unsuccessfully. Mr. Page operated in October, 1848."

In the cases detailed above, the strength of the patients had been much reduced by the constant discharge of matter from the diseased structures, and from their being constitutionally scrofulous. In healthier subjects recovery would have been quicker, and the chances of success more certain.

The mode of operating, as described by Mr. Greenhow, was as follows:—

"1. Incisions were made from the inner and outer ankles, meeting at the apex of the heel; and then,

2. Others extending along the sides of the foot, the flaps being dissected back, so as to expose the bone and its connexions. These being divided, the bone was removed, and the astragalus and cuneiform bones carefully examined. Where necessary, the saw was used, and then the flaps were brought together and secured by sutures, plaster, and a bandage. It was found better not to remove any integument, as was done in the first case."

On Syphilitic Eruptions; with Especial Reference to the Use of Mercury. Illustrated by Cases. By Thomas Hunt, M.R.C.S., pp. 25.

The author's object in this pamphlet, which contains a condensed view of the diagnosis, prognosis, and treatment of syphilitic eruptions, and other forms of lues, is primarily to point out the deplorable effects of the non-mercurial treatment, and secondly, to prove, that by a series of short and energetic courses of mercury, so administered as to arrest the disease without doing injury to the gums, much more good can be effected than by unremitting persistence in its use for weeks or months together. With regard to the non-mercurial or alterative treatment, Mr. Hunt expresses his conviction that by it the disease is only rendered tolerable, not cured; that though the symptoms may be arrested, the poison remains in the system, either to break out again under symptoms favourable to its development, or to infect the offspring, and thus add to the increasing number of hereditary syphilitic eruptions.

Under the second head, (the mode of administering mercury,) Mr. Hunt enunciates a principle, which, if correct, will not only serve to secure the full efficiency of mercury, but to dispossess this mineral of its noxious and mischievous properties. He conceives that all the good to be derived is obtained, not only before salivation is brought about, but even before the gums become tender, and that it seldom exerts a beneficial influence on the disease *after* it has begun to act injuriously on the tissues. He therefore breaks off the course as soon as healthy action appears in the diseased parts, without waiting for other evidence of its action on the system; renewing the course, if necessary, in doubtful doses after the patient has been treated by tonics or purgatives. Observing that the system soon becomes inured to mercury, and that then it has little or no influence over the disease, Mr. Hunt's object is to produce a sudden effect, a kind of shock, in each course, under which a rapid restoration is said to take place. He maintains that this healthy action always takes precedence of the soreness of the gums, and that under an indiscreet perseverance in the mercurial treatment the disease is often observed to return even more severely than at first. This is attributed by him to the debilitating effect of an overdose,

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the disease being purely syphilitic, and as such may even require a future exhibition of mercury to eradicate it from the system.

These views are illustrated by a number of cases; and the author claims, as supporting his views, many of those related by Hunter, Abernethy, and other writers, for the purpose of establishing a different theory.

In this pamphlet a very simple view is taken of a subject hitherto shrouded in controversy and contradiction. The varieties of syphilitic and pseudo-syphilitic diseases are described as modifications arising from constitutional peculiarities or accidental circumstances, it being assumed that there is but one syphilitic poison, requiring but one remedy for its removal, the successful treatment depending upon the adroitness, intelligence, and vigilance with which the remedy is administered.

We cordially recommend this work to the attention of the members of our profession, that they may, in common with the author, further test the proposed system of treatment. To such experiment there can be no objection; and if successful, it will be the means of establishing a method of practice, at present so great a desideratum, by which the syphilitic virus may be eradicated without any injury to the constitution.

The Scale of Medicines with which Merchant Vessels are to be Furnished, by Command of the Privy Council for Trade; with Observations on the Means of Preserving the Health and Increasing the Comforts of Merchant Seamen; Directions for the Use of the Medicines, and for the Treatment of various Accidents and Diseases. By T. Spencer Wells, F.R.C.S. pp. 190. London: W. Orr & Co.

This useful and unpretending little volume should be in the possession of all those in charge of vessels at sea. Mr. Wells has given very clear and plain directions through the work, and has evidently founded his remarks on experience. His observations upon Diet and Ventilation are extremely judicious. Short and practical outlines are given of the various forms of disease most likely to occur on a voyage; and a concise and plain direction for the administration of medicines and their doses. The work will be an acquisition to the officers of vessels not carrying a qualified medical practitioner.

A Small Contribution to the Great Exhibition of 1851. By J. C. H. Freund, M.D. Pamphlet, pp. 36.

Dr. Freund reasons on the probable effects of the present influx of strangers on the health and disease of London, and shows, we think, that fears on these points are groundless. He suggests, however, that the authorities in power should take steps to prevent the importation of contagious maladies, and offers some important suggestions on that point.

Diseases of the Human Hair. From the French of M. Cazenave. B. T. M. Burgess, M.D. Renshaw, Strand.

Dr. Burgess has divided this little book into four chapters; the first contains a description of an apparatus for fumigating the scalp, in certain chronic diseases of that part, involving the loss of hair. The remaining three chapters are from the French of M. Cazenave; they treat of the anatomy and physiology of the hair, alopecia, or the loss of hair from natural causes, debility, or disease, and of the management of the human hair in health and disease; the book contains much that is novel, and is worthy the attentive consideration of the reader.

The Prescriber's Pharmacopœia; containing all the Medicines in the London Pharmacopœia of 1851. By a Practising Physician. Fourth Edition. 16mo. pp. 132. London.

One of the smallest but most useful works that has issued from the press for a long period. To the man in active practice, as a ready, convenient, and pocket reference, it must be most valuable.

Practical Remarks on Retention of the Placenta, with especial reference to the condition termed Hour-glass Contraction of the Uterus. By Richard Hodges, Esq., F.R.C.S.E., Rochford, Essex. 12mo, pp. 14. The Lancet Office.

In upwards of a thousand cases of labour attended by him, Mr. Hodges observed the following occurrences:—

"In rather more than one-third of the cases, the placenta was either expelled at one and the same time with the child, or passed away of itself in from five to twenty minutes after the birth of the infant. In three or four cases it was retained through uterine inaction or fatigue—the consequence of difficult or tedious labours, and in one of these cases there was partial adhesion of the placenta to the uterus. In two instances the placenta was kept back through what is termed hour-glass contraction of the womb. In the remaining cases, constituting by far the greater number, the placenta was not excluded within the period specified—twenty minutes; the uterus, however, was in all of them firmly contracted, and the after-birth consequently separated from the organ, the mass remaining partly in the vagina, and partly in the uterus, in a position from which it might at any time be safely removed, provided that the womb be felt 'hard as a ball' through the walls of the abdomen."

Mr. Hodges infers that in many cases practitioners have supposed they were extracting the placenta from the uterus when they have, in reality, been merely removing it from the vagina after its detachment; and he lays down the following as a rule, which he has found to admit of no exception:—

"That if the uterus, upon examination, be felt firmly contracted, and the insertion of the cord into the placenta easily distinguishable, and the finger capable of being carried round the mass when in the vagina, it can be removed with safety and advantage."

As a practical direction for the removal of the placenta in the event of its adhesion to the uterus, Mr. Hodges recommends the practitioner, after the introduction of his hand and arm,

"To expand the fingers over the fœtal surface of the mass, and *draw its edges towards the centre*, by which manœuvre frequently it is separated, and safely taken away."

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Mr. Hodges professes himself unable to give a satisfactory reason for the occurrence of hour-glass contraction of the uterus—a condition which he states he has met with on only two occasions. We shall here detail the second of these cases in the the words of our author.

"Mrs. B., of Rochford, sent for me when in labour with her tenth child. Soon after my entering the room the child was born. In about a quarter of an hour afterwards, flooding to a great extent took place, syncope at once occurred; the pulse could not be perceived; the surface was cold and blanched, and she appeared at the point of death. I immediately introduced my right hand and arm into the womb, and met with no difficulty until I had passed some way beyond the os uteri, when I soon discovered the womb to be firmly contracted at about its centre, leaving only a small aperture through which the cord escaped from the upper into the lower part of the organ. One finger after another, as in the preceding case, was slowly introduced through this opening, when the hand and arm after a time passed into the upper division of the 'hour-glass,' and the placenta having been detached—for it was slightly adherent—was easily taken away. She soon recovered, remaining only weak from the loss of blood prior to the operation described."

A Practical Treatise on the Diseases of the Urinary and Generative Organs. By WILLIAM ACTON. Second Edition. 8vo., pp. 693.

THE present edition of Mr. Acton's work is very much enlarged, nay, re-written, extending to nearly 700 pages, exclusively of the plates, and contains certainly a most valuable collection of matter. He has not merely cited his own experience on the methods of treatment which have been found successful in British or continental hospitals, and employed in private practice during the last fifteen years, but he has drawn largely from the treatises of Astruc and Hunter, as well as quoted freely the most novel doctrines and practical hints contained in the writings of Ricord, Brodie, Prout, and Lallemand. But the most satisfactory point is the scientific manner in which the subjects are treated, and the author appears to have availed himself freely of the assistance of those who have paid special attention to the collateral branches of the profession, so as to aid the diagnosis, and render the discernment of the true pathological state of each organ concerned as easy as possible.

The author doubts the decline of syphilis in the present day:

"Far from thinking, then, that syphilis has become milder, I only believe that public health is more studied, the treatment of the complaint is better understood, and patients apply earlier; but the germ of the disease lurks amongst us, and in as concentrated a form as ever."—p. 11.

He very properly comments upon the absurd restrictions, lately removed from the Middlesex Hospital, but still enjoined at the London Hospital and some other medical institutions, of prohibiting the admission of patients affected with syphilis.

The author denies that there is anything specific in gonorrhœa—or blennorrhagia, the term he prefers—not in regard to its inoculability merely, which must of course be regarded as decided in the negative, but with a view to its admitting of two forms—the simple and virulent. This is a point which many will be prepared to resist; the old notion has become so firmly rooted, that few now-a-days enter upon the question. That common inflammation can produce a virulent form of the disease is the disputed point. The fact, however, seems strikingly borne out by the case of Swediaur, corresponding with others occurring to the author. He found that after injecting a solution of ammonia into his own urethra, a most violent purulent discharge came on from the whole canal, which it required six weeks to cure. Here it is clear that a chemical irritant produced a virulent form of the disorder; and that the same may be derived from communication with a female labouring under disease of the uterus or its appendages seems to be an indisputable fact.

Mr. Acton gives an interesting article on the Diagnosis of Gonorrhœa, and points out the care necessary in deducing conclusions as to the source from which it is derived. The minutest details, which are frequently of great importance to the practitioner, are not overlooked. Thus, in using injections of nitrate of silver—certainly the most efficacious—"should, by accident, any of the solution fall on the linen, and produce stains, the best way of removing them is by covering the stain with the tincture of iodine, allowing it to remain a few minutes, and then applying a solution of hydrosulphate of soda."—(p. 89.) It is well to have such information at hand.

The first portion of the treatise, comprising the varieties of blennorrhagia and its consequences, and other affections, which may be considered venereal, but not syphilitic, occupies 346 pages. The remainder treats of syphilitic affections. Regarding the transmission of syphilis to animals, the author remarks—

"Until the present year (1850) this pus (of chancre) has been supposed incapable of producing its specific effects upon animals, notwithstanding all the attempts that John Hunter, Ricord, and others, have made to inoculate them. M. Auzias believes, however, that he has succeeded in inoculating animals; but, as stated in the foot-note, it is still a doubtful question if syphilis has really been communicated to animals; and if, in the few cases in which this is said to have occurred, the virus has not merely been transplanted, this, at least, on the evidence we at present possess, seems to have been the case."—p. 355.

In regard to the interesting question of the existence of one syphilitic virus only, or a plurality, the author remarks, that "the result of nearly all recorded experience is, that a particular ulcer does not produce a similar sore in the individual (to that existing in the individual?) from whom the disease has been contracted. This is now so generally admitted, that a modern author may almost take it for granted, as a generally admitted fact, *that one virus only exists*, which is modified according to the state of system of the individual who contracts the disease,"&c. —p. 376.

Regarding the question of the internal exhibi-

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tion of mercury in indurated chancre, the author remarks, after detailing a case in which no mercury was given at first, the sore remaining for some months, followed by secondary syphilitic affection of the skin, throat, and iris, and ultimately requiring the use of the mineral. "This, and other cases that I could detail, more fully than ever corroborate my opinion, that mercury is absolutely necessary for the treatment of indurated chancre. Whatever difference of opinion may exist on the mercurial or non-mercurial treatment of simple or phagedænic chancre, authors, almost without exception, agree, that in the indurated chancre mercury is absolutely necessary, either for the dispersion of the local affection, or for the prevention of secondary symptoms. There may be slight differences as to the doses and forms, but on the fact (necessity?) of giving mercury great unanimity exists."

Our space does not permit us to give more than these brief abstracts upon some few of the interesting points discussed in this volume. There are many others, which we are compelled to omit, but a knowledge of which is of great importance to the practitioner. In fact, the work contains a large amount of most valuable information.

Chemical Researches into the Nature of Cholera. By ROBERT DUNDAS THOMSON, M.D. Pamphlet, pp. 32. London: Adlard & Co.

DR. THOMSON's views regarding cholera have already been noticed in THE LANCET, in our reports of the medical societies. In this essay Dr. Thomson enlarges upon those points to which he formerly adverted, and bases his deductions on a number of carefully considered experiments. He has examined with great care the constituents of the blood, and the fluids ejected from the body under the influence of spasmodic cholera.

The blood and fluids, more particularly the former, were compared with those of the same class of persons in health or suffering from other diseases.

Some attempts were made to throw light upon the idea naturally suggested by the first view of the progress of the disease, of the prevalence of a tangible poison in the atmosphere, which acted as the efficient cause of cholera.

The author takes a review of the different stages of this disease—the laxative stage, or that of invasion; the lymphatic stage, or leucorrhœal—the collapse stage of others; and the biliary or cholerrhœal stage of Buchanan, characterized by return of bile to the intestinal canal, and the setting in, generally, of smart febrile symptoms. Our space will not permit of a lengthy notice of this valuable essay, and we refer the reader to the pamphlet, observing that it is one of the most comprehensive chemical expositions of the kind we have yet met with. The conclusions Dr. Thomson arrives at from his experiments are the following:

"1. That the incipient stage of cholera does not differ materially from the common forms of diarrhœa, inasmuch as its treatment is successfully managed by similar means; and this result may lead to the inquiry—Does not the removal of the symptoms of the disease by narcotics, and, therefore, the retention of the fluids in the system, afford an argument against the idea of a morbid poison being the cause of cholera?

"2. That in the second stage of cholera, a lymphatic fluid is diffused from the blood into the intestinal canal, corresponding exactly in chemical composition with that secreted or diffused through the serous membranes in hydrocele and hydrocephalus, and other forms of dropsy. Compared with healthy blood, it appears that the salt which has diffused most largely, into the intestines, is common salt, while the albumen of the blood possesses this power of transference generally in a very limited degree. The facts seem to show, that in this stage, instead of as in the natural state the diffusive power of the mucous membrane being exerted from the intestines towards the blood, the reverse action occurs; thus pointing to a parallelism with purely physical phenomena. Conjoined with other characters, they supply an argument for the inquiry—May not cholera be an epidemic intestinal catarrh, influenza being an epidemic respiratory catarrh?

"3. In the third stage the lymphatic fluid ceases to be poured out from the blood. The bile is excreted, and the normal diffusion from the intestines to the blood resumes its action.

"4. There is no evidence of the existence of any organic body in the atmosphere during the the prevalence of cholera, and hence the inquiry is suggested—May not this and parallel diseases which are not contagious, such as ague, be principally due to meteorological and physical influences, acting on debilitated habits, and thus a distinction be established between them and contagious affections produced by morbid poisons, as typified by small-pox?"

On a Case of Peculiar Nervous Phenomena supervening on an Attack of Paralysis. By E. JOHNSON, M.D., M.R.C.S.E., (Carnaby-street.) London. 12mo, pp. 22. THE LANCET Office.

THE particulars of the following case, before coming under Dr. Johnson's treatment, were derived from a near relation of the patient.

Captain R., an army officer, in the year 1820, had a severe attack of fever in the West Indies, followed by ophthalmia, which destroyed the sight of the right eye, and slightly impaired that of the left. Throughout 1827 he had severe pain across the loins: from 1832 to 1834 he complained of acute pain under the right eyebrow, he had also inflammation in the ear, and became somewhat deaf. From 1840 to 1842 the pain in the head continued without intermission, and was attended by singing in the ears and giddiness. On one occasion, an attack of partial hemiplegia was experienced; and twice in 1842 the patient fell, but retained consciousness. In 1846, on a voyage homeward from the West Indies, he was suddenly attacked with a difficulty of passing urine, and only after much straining succeeded in voiding about two ounces at a time.

When he placed himself under the care of the author, soon after this, he stated that "he felt a continual desire to void his urine, and he imagined the bladder to be always full. He made constant attempts to micturate; sometimes he succeeded in passing a wineglassful; at other times not a drop flowed. When his attention was by any means withdrawn from the act, the urine would pass freely, but the moment it was redirected, the stream was instantly arrested, and all further efforts proved useless. A full-sized gum-elastic catheter passed without difficulty, and there was drawn off about a teacupful of urine, quite clear; specific gravity 1024, acid reaction. The bladder was subsequently explored with a silver sound, and found no

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to contain a calculus." Tincture of sesquichloride of iron in scruple doses, with tinctures of valerian and hyoscyamus, and camphor mixture, were prescribed three times daily, suppositories with two grains of opium every night. Bowels regulated with blue pill and colocynth. These remedies were continued for a month with partial success. Strychnine, in doses of the eighth of a grain, three times a day, were tried for a week without advantage.

At the expiration of five months, change of air was suggested, and Capt. R. went to Plymouth, where he fell in with his old regiment stationed there. For the first two months, the excitement of meeting old friends made him think less of his complaint, and he felt better; but upon the embarkation of his regiment for a foreign station he again relapsed into his former state. He was soon compelled to use the catheter more frequently than formerly. The deafness increased, and the sight of the left eye became still more impaired.

Such was his condition in 1847, when he was seized with paralysis, which came on abruptly, after exposure to cold on the sea, and which attack, with the subsequent details, was reported to Dr. Johnson by Mr. Bellamy, of Plymouth.

At the time of this attack he complained of an odd sensation in his throat; and from this time it would appear, from the report furnished, that he was unable to swallow fluids. "The instant a drop touched the pharynx, a train of symptoms presented themselves resembling a paroxysm of hydrophobia." There was not even the power of swallowing the saliva, and a frequent raking cough occurred, apparently as a reflex action, set up to free the tube from a tenacious mucus that collected within it.

We regret that want of space prevents our inserting here the well-related account of the daily progress of the case and treatment to the period of decease. Leeches, blisters, enemas, hot poultices and sinapisms to the throat, were employed, and for the last two days three grains of calomel were administered every third hour, by being placed on the tongue. Mr. Bellamy reports that the patient complained of no pain, and that the pharynx was perfectly natural in appearance. In reference to what was experienced in the pharynx and œsophagus during attempts to swallow, he thus give the patient's own words:—

"You know," said he "those kind of candlesticks which have a long socket for the candle, with a spring at the bottom by which the candle is forced upwards; that is exactly what I feel." Not only did this sensation exist whenever an effort was made to pass anything into the stomach, solids as well as fluids, but the mere mention of eating or drinking, or the smell of viands, produced the same inverted action—viz., that of squeezing or thrusting upwards. At this time (two days before death) solids would pass with little difficulty, though with considerable slowness, as low as the cardiac orifice of the stomach, but on reaching that point, an inverted action was set up, and every particle expelled with force. Fluids could not pass so low.

The patient ultimately expired suddenly in bed, four days from the last seizure, while endeavouring to drink some broth, and submitting to the introduction of a suppository. His intellectual powers remained unimpaired to the last.

The post-mortem examination, twelve hours after death, revealed the following appearances: The brain gorged with blood; fluid in the ventricles, and in the theca of the marrow spinal; a large clot, full half an ounce, of recently effused blood, on and between the posterior lobes of the cerebrum; the cerebellum and medulla oblongata of considerably greater density than usual, almost capable of being torn into strips; the optic nerves of a consistence almost cartilaginous. The heart larger than natural, and fully four ounces of fluid in the pericardium; the lungs healthy; the ensiform cartilage and the cartilages of the ribs ossified. The abdominal parietes thickened and consolidated; the whole of the abdominal viscera glued together by old adhesions. The liver indurated, enormously enlarged, and adherent to the diaphragm and neighbouring viscera; the œsophagus healthy, neither thickened nor inflamed.

In his remarks on this case, Dr. Johnson refers the headache, giddiness, numbness of the face and arm, and partial loss of articulation, to congestion of the cerebral vessels; and he considers that this led to slow alteration in the nutrition of the brain, giving rise to the increased consistency of that organ after death. He goes on to ask—

"Should the first link in the chain of morbid action be sought for in the disordered condition of the circulating organs? This seems to me by no means improbable. The hypertrophied heart contracting with undue force would propel its blood to the brain with an increased impetus, and thus occasion and maintain a constant state of cerebral hyperæmia. Upon this condition of circulation, heightened by exposure to cold after severe exercise, was doubtless dependent the last fatal apoplectic attack. It was characterized by the most conclusive of all the signs of sanguineous effusion within the cavity of the cranium—hemiplegia; but in addition there were peculiar symptoms about the pharynx and œsophagus. Upon examination of the body after death, we meet with extensive effusion of blood about the posterior lobes of the cerebrum, accounting fully for the paralysis, but we do not discover any particular lesion to which the latter anomalous symptoms seem specially referable. Should they be referred to spinal meningitis, of which the effusion within the theca of the cord may be named as an indication? or should they rather be viewed as dependent on mere functional derangement upon that peculiarly irritable condition of the entire nervous system, of which the difficulty of voiding urine, and the irritable despondency of manner of the patient, might be conceived to afford corroborative proofs?"

On the Power of Arsenic over Lupus and other Obstinate Affections of the Skin. By W. J. Cox, Esq., Surgeon, Bridgend, Glamorganshire. 12mo, pp. 14. THE LANCET Office.

Psoriasis.—Eliza B——, aged twenty-one years, applied to the author, suffering from scaly eruption, extending over the face, neck, shoulders, chest, and lower extremities, leaving the hands comparatively free. The disease had existed for eighteen months, and had been suspected syphilitic, in consequence of which notion, probably, the patient had been once salivated—apparently, however, without benefit; nor, according to our author, did there appear ground for the supposition of a syphilitic origin. Mr. Cox, however, ordered at first five grains of iodide of potassium in infusion of quassia three times a day. After persisting in this treatment for three or four weeks, the bowels became irritable, and the stomach intolerant of the remedy, without the psoriasis being diminished in degree. Four drops of the liquor arsenicalis were now administered three times daily, accompanied by a cup of strong broth or beef-tea. No other prescription appeared necessary, as the functions of the sys-

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tem generally were performed normally, and there was not at any time a tendency to febrile action. The patches progressively disappeared, and healed—at first on the face and breast, in proportion as the mineral became absorbed into the system; in about a month they had vanished, except on the thighs and legs, and another fortnight sufficed for their entire disappearance. "In this case, (adds Mr. Cox.) it was remarkable that the conjunctiva remained almost unaffected until the cure was nearly complete."

Lupus.—Miss P., aged thirty-two years, had three years previously received a blow on the cartilage of the nose, and "about a month afterwards, a shining tubercle, not much elevated, but hard, and surrounded by dusky congestion of the skin, appeared on the left ala nasi. About nine months after its first appearance, it ulcerated, and discharged a foul ichor, and then slowly healed, like a patch of excoriation, leaving a permanent ulcer in the centre." The internal administration of iodine, and topical application of ointment of nitric oxide of mercury, seemed to improve the appearance of the wound for some time, but at the end of four months it was as bad as ever. Cod-liver oil and sesquioxide of iron were persisted in for at least six months without advantage as regarded the sore, which when Mr. Cox first saw it, presented the appearance of a foul superficial ulcer, exuding occasionally a little tawny discharge. "The edges were irregular and indurated, and the surrounding skin was raised, thickened and inflamed. There were also two shining tubercles on the corresponding cheek. The surrounding inflammation looked peculiarly indolent and unhealthy, and the sore had a decidedly malignant appearance. The cervical glands were unaffected." Mr. Cox ordered the arsenical solution, "in doses of five drops, three times a day, and afterwards reduced the dose to two drops, and finally to one drop. From the time that the peculiar constitutional effect of the remedy became manifest, the ulcer began to present an approved appearance, and to heal slowly." The use of the remedy was continued for five months, after which time Mr. Cox learned from the patient that a slight redness on the cheek was all that remained.

Ulcerous Tumour of the Lip.—In the report of this case we quote Mr. Cox nearly verbatim:—

"James R——, aged sixty-four years, came to me, with a foul ragged ulcer on the lower lip. The base and edges felt as hard as cartilage, and he complained of gnawing nocturnal pains, which had tormented him for more than six months. He referred the affection to the irritation of smoking, and says he had noticed a swelling and hardness of an indolent character for upwards of a year before the part ulcerated. Had been lately advised excision by a surgeon, who pronounced it scirrhus, but he was unwilling to submit to the knife. There were slight swelling and induration of the sub-maxillary and cervical gland, but he stated he had always been subject to glandular enlargements. As I found from him that mercury, iodine, opium, &c., had been employed again and again, both locally and generally, as a last expedient, I resolved to try the arsenic. In about ten days, the eyes became suffused, and the stomach irritable, and he complained of symptoms indicative of some degree of febrile disturbance. I omitted the arsenic for a few days, and gave him an aperient, resuming the mineral in diminished doses as soon as the temporary over-excitement of the system had passed off. There was no amelioration observable in the aspect of the sore for at least two months, but he expressed himself relieved from the nocturnal pains, and he slept well. About the expiration of that period, however, the hardness began sensibly to lessen, and the ulcer to assume a healthier appearance. Up to this time I had not interfered with it topically. I now applied the citrine ointment, continuing the arsenic as before. The cure from that time was gradual and progressive, and was completed in about six months from the time of his being placed under my care, not the slightest vestige of the induration appearing.

"The only remark that I shall make on this case is, that I think it tends to show how guarded and cautious surgeons should be, in their diagnosis of malignant disease, ere they subject their patients to the pain, and perhaps permanent disfigurement, of an unnecessary operation. I believe, with my friend Dr. Riadore, (who used to state it as his opinion, derived from long experience,) that scirrhus of the lip is really of very rare occurrence; and that nine-tenths of the cases asserted to be such are parallel to the above—viz., foul and ill-conditioned ulcers, but not of a true malignant nature, and which will always yield to the internal administration of appropriate remedies—sometimes to opium, after purging: but oftener, I believe, requiring the long-continued exhibition of arsenic."

Mr. Cox, at the outset of his paper, records his thanks to Mr. Thomas Hunt for the lucid exposition of the general effects, and proper mode of administration, of arsenic, given in his work on Skin Diseases. He also expresses his pleasure to find, that Dr. Copland, in his Medical Dictionary, bears testimony, from his personal experience, to the great efficacy of the liquor arsenicalis in inveterate lepra and psoriasis; and he corroborates the opinions of Mr. Hunt, that it ought not to be held discouraging, if the remedy apparently produce no benefit for a considerable space of time, and that it should be exhibited in very minute and frequent doses.

On the Structure of the Membrana Tympani in the Human Ear. By JOSEPH TOYNBEE, F.R.S., Aural Surgeon to St. Mary's Hospital.

WE have already given an abstract of the principal part of the investigation, but in the appendix to the present publication we observe that Mr. Toynbee has recently made an important addition to our knowledge of the anatomical structure of the drum, of which the following is a short description.

"Between the epidermoid and radiating fibrous layers of the membrana tympani, there is a distinct and complete lamina of membrane which is continuous with the dermoid layer of the meatus. The presence of this membrane, to which, on account of its structure and functions, I have given the name of dermoid layer, is best demonstrated by carefully dissecting under water, the membranous meatus from the upper surface of the osseous tube, as far as the attachment of the membrani tympani; at this point the periosteum of the meatus is seen to become continuous with the radiate fibrous lamina; this being cut through, the dermoid layer is seen passing down over the outer surface of the radiate fibres, and separating them from the epidermis. If the upper portion of this layer be drawn gently downwards by one hand, by means of a fine needle in the other, the delicate cellular tissue connecting it to the fibrous lamina can be broken up, and it may be removed entire. The presence of the dermoid lamina may also be shown by the introduction of a fine bristle between it and the radiating fibrous layer, at the superior part of the

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membrana tympani, and then by passing it down, the cellular tissue is lacerated. In a healthy state, when uninjected by blood or by artificial means, the dermoid lamina is thin and transparent; examined by the microscope, its structure is found to resemble areolar tissue. When injected, this membrane is observed to have numerous bloodvessels ramifying through it, and they form an elaborate plexus; when these vessels are enlarged, they give the red appearance to the surface of the membrani tympani which is so frequently met with during life. It is upon the supply of nerves to this membrane that the exquisite sensibility of the membrana tympani depends. A knowledge of the existence of the membrane here described is of interest to the anatomist, who recognises in it the secreting organ of the epidermoid layers of the membrana tympani; and to the surgeon, who by its presence is able to understand phenomena occurring in certain diseases of the ear which have been hitherto incomprehensible to him."

The Merits of Teetotalism and Partial Abstinence. By JOHN CHADWICK, M.D. Edin., Bury, Lancashire. 12mo, pp. 17. The LANCET Office.

AN essay, bearing, as its name implies, upon the subject of the relative merits of partial and total abstinence from alcoholic fluids in their relation to the vital forces. The author, feeling the necessity, under certain circumstances, for a due administration of stimulants, seeks to ascertain the true position of that uncertain starting point mentioned in a letter of Dr. Carpenter, "an average man." He proceeds thus:—

"I should like to know, in the first place, what Dr. Carpenter means by the phrase 'average man,' which he has adopted; a very vague phrase indeed for a philosopher. I know what is meant by average duration of life when called upon to certify for an assurance company; and used to know what was meant by average price of grain in the days of the sliding-scale; but what to understand by 'average man,' I know not. This I know, however, that the averages were more than suspected to be tampered with, in the days of the sliding-scale, by interested parties; and I can readily foresee that human averages will be tampered with by interested parties; if, as Dr. Carpenter has decreed, the average man must have no drink; for it is well known that these pernicious alcoholic liquors are very agreeable to take, and that abstinence from them requires very strong exercise of self-denial."

Dr. Chadwick, in contending for the necessity of a certain amount of stimulus, holds, however, to the instructions given to Phaeton, when assuming the reins of the horses of the sun: *in medias res tutissimus ibis*, and seeks, in conclusion, to impress the great importance of his conviction, that

"Medical men ought in practice always to bear in mind the narcotic action of alcohol. For example, when a man's strength is reduced by sickness or overwork of mind and body, it is customary to advise him to take the benefit of change of air, expecting him, in so doing, to derive good from pure air, pleasant scenery, cheerful society, and rest of mind. Now all the benefits he derives from these things he gets through his nervous system, and if he blunts the susceptibilities of that system by taking too much wine, or by taking it out of season, he defeats his own object.

"I have believed for some time that the narcotic action of alcohol is overlooked by the public, and in a degree also by the profession; and it was in order to awake attention to it that I published an essay some sixteen months ago. I found, as I stated in the preface, that this part of its action was quite lost sight of in common temperance literature; and likewise in an article by Dr. Carpenter, in Dr. Forbes' *Review*, on the subject, in which he says:—'It appears, then, that the physiological influence of alcohol upon the system under all ordinary circumstances, cannot be attributed to anything else than its *stimulant* character,' and though he has since admitted, at section 14 of his prize essay, the narcotic influence of alcohol, he does not seem ever to have allowed this fact to come fairly before his notice."

Practical Remarks on some Exhausting Diseases. By Sir JAMES EYRE, M.D. Second Edition. pp. 110. 8vo. London.

SIR JAMES EYRE'S little work is essentially practical, and is one of those few books which may be fairly said to be written "from and not for practice." We spoke favourably of the first edition of "Practical Remarks;" and in noticing the second issue of the work, we are pleased to observe that the opinions and facts put forward in the first edition have been fortified and strengthened by the further experience of the author. The remedy which Sir James Eyre regards as all but a specific in cases of passive hæmorrhage of almost every kind, is the oxide of silver, and certainly the ample evidence which he has adduced of its efficacy entitles him to hold a very high opinion indeed of this medicine. The work must necessarily be of great value to all practical men; and to such we cordially recommend it.

Observations on some of the Complications of Hernia, and on Obstruction of the Intestine within the Abdomen. By R. R. ROBINSON, M.R.C.S., &c., formerly Surgeon to the London Dispensary. Pamphlet, pp. 20.

THIS pamphlet contains an interesting and useful account of various conditions which may mislead the practitioner in the diagnosis and treatment of hernia. The writer begins with cases of reduction of a hernia, together with its sac, or reduction *en masse*, as it has been called; next of entire adhesion of the sac to its contents; then of other rarer complications; and each variety is illustrated by one or two well-chosen cases, chiefly from the author's practice, and by a few sensible remarks. When we say that within the limit of twenty pages there are noticed no less than *fourteen* possible contingencies in the history of hernia, some of them of extreme rarity, we may truly add that we have seldom seen more really valuable matter compressed into smaller bulk, and that many a well advertised octavo is spun out of far flimsier materials than are contained in the modest *brochure* before us. The complications of hernia with peritonitis, the possible co-existence of two or more herniæ, are well detailed; and the case in which strangulation of a small knuckle of intestine, in an old debilitated subject, during the cholera, produced so much collapse that the pa-

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tient died in thirteen hours, the hernia being undiscovered till after death, is very remarkable, and well worthy of perusal.

Urinary Deposits; their Diagnosis, Pathology, and Therapeutical Indications. By GOLDING BIRD, M.A., M.D., Assistant-Physician to Guy's Hospital. Foolscap 8vo, pp. 428. London. Third Edition.

IT is quite unnecessary to give any extended notice of this really practical and scientific work. The first two editions received at our hands a well-merited compliment to their value and usefulness, and in welcoming a third, we can only reiterate our commendation. The work has been almost re-written, and has been amended and improved by the more extended experience of the author. We notice with much pleasure that a graceful compliment is paid in the preface to the memory of Dr. Prout, "one who has left us a noble example of scientific zeal curbed by caution, of patient labour guided by a logical mind, and of extensive acquirements rendered more attractive by the modesty of their possessor."

THE SOCIETY OF APOTHECARIES AND PRELIMINARY EDUCATION.

A LEARNED divine has said, that as regards this world, we should act as though we were to live for ever, and as regards the next, as though we were to die to-morrow. Certainly, the conduct of the Society of Apothecaries comes up, in some respects, fully to the first half of this maxim. We admire the unflinching constancy with which this body, while everything relating to medical reform is shifting and uncertain, and while their own extinction seems one of the most natural things to happen, steer on in their course of raising the standard of medical education, as though they were for ever to be examiners, and for ever to regulate the education of a large proportion of our medical youth. As regards the supervision of unlicenced practitioners, they have suffered themselves to become extinct; but as regards the student whom they have taken under their especial care, and, we must say, vastly to his advantage, their vitality is wonderful. Their movements, too, are generally well considered. It is a common saying of the Council of the College of Surgeons, that the Council never do anything right in the way of educational arrangements at the first trial. They generally try the wrong tack first, and then have to retrace their steps. The Society of Apothecaries exhibit in these things a more deliberate and uniform course of action.

Their last movement was in favour of Clinical Medicine; they now grapple with the subject of the extra-professional education of students. Instead of confining themselves to CELSUS and GREGORY, they are desirous that their examinations should test the education of the student before he enters upon his strictly professional career. The following resolutions are the result of the deliberation of the Court of Examiners:—

"Apothecaries' HALL, May 13.—At a Court of Examiners held this day,—

"Resolved,—'1. That a preliminary examination for junior students of the medical profession would be desirable, as an important auxiliary to their subsequent professional studies.

"'2. That such examination should comprise an inquiry into the students' knowledge of the Latin and Greek languages, and of the elements of mathematics.

"'3. That students should be admissible to such examination at any period from the date of their apprenticeship to the completion of the first winter session of their curriculum.

"'4. That such examination should, in the first instance, include the following subjects—viz.

"'1. The first book of Virgil's Æneid and Cicero's Oration for Milo.

"'The Greek Testament to the end of the Acts of the Apostles; or, the first book of Xenophon's Anabasis, at the option of the candidate.

"'3. Algebra, as far as Simple Equations.

"'4. The first book of Euclid's Elements.

"'5. That students who pass this examination satisfactorily should not be subject to any subsequent examination in Latin, except the Pharmacopœia Londinensis and Prescriptions.

"'6. That students who have not passed this examination should for the present be allowed, as heretofore, to undergo the preliminary examination in Celsus and Gregory, after they have completed two winter sessions of their medical studies."

It will be seen that at present these resolutions are not to be acted upon compulsorily. Some years must elapse before Latin and Greek and mathematics be generally demanded from medical students. We give full credit to the Apothecaries' Society for their desire to push on towards this very desirable consummation. This optional matriculation examination will, we doubt not, be passed by many of the best educated students, who would think no time or labour lost which contributes to give them such an honourable testimonial as the passing of this examination would confer. Some, we are aware, are of opinion that scholastic learning weakens the thirst for strictly professional knowledge. A few unhappy instances can doubtless be pointed out in our own profession of men of great classical and literary attainments with a very weak faith and practice in the healing art; while it is notorious that men of letters are often the great condemners and despisers, not only of medical, but of physical science, and the warmest patrons of quackery. However, no choice is left; in the advance of education it becomes absolutely necessary that the general surgeon of this country should be highly educated. It is not by falling back upon ourselves and our own immediate studies that we can claim the proper rank for legitimate medicine. We must combine them in at least a proper degree with that knowledge which all the world can appreciate.

The Society of Apothecaries have rescinded their by-law which has reference to the qualifications of recognised lecturers on chemistry. This is a step in the right direction. The following is an abstract from a letter received by Dr. MUSPRATT from Dr. SEMPLE:—

"I am happy to inform you that the Liverpool College of Chemistry is recognised as a school of practical chemistry, and you can enter pupils to the course as soon as you please. I entirely agree with you upon

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the necessity of a *practical* course of chemistry, as contra-distinguished from a mere course of lectures on that subject; and it has been precisely that conviction on my part which has led me to advocate most strenuously the necessity of students undergoing a course of manipulations in chemistry *performed by themselves, in addition* to the usual lectures, and this regulation comes into operation this very month."

We congratulate Dr. MUSPRATT on the just triumph he has obtained.

Students of medicine resident in Liverpool will now have an opportunity of attending, with due effect, an excellent practical school of *Chemistry*, and they may be assured that the information afforded by the laboratory ought to be one of the first acquisitions in medical education.

ADULTERATION OF COFFEE.

WE are glad to perceive that Mr. BARING is about to take the opinion of the House of Commons upon the propriety of the legalization, by the Lords of the Treasury, of the adulteration of Coffee.

As this is a question of common honesty and public health, we do hope that a majority of the members of the House will record their votes in favour of the measure to be submitted to it by Mr. BARING, and that they will not permit it to be said that Parliament has deliberately given its sanction to practices opposed to every principle of justice, and dangerous to the health and lives of the community.

If we are a nation of shopkeepers, at least let us endeavour to be honest in our dealings.

In the long and interesting debate which recently took place in the House, several members expressed, in the strongest terms, their condemnation of the conduct of Government in legalizing the adulteration of coffee. The remarks which fell from Mr. BARING, Mr. CARDWELL, Lord CLAUDE HAMILTON, the Hon. Mr. STANLEY, and other members, were particularly forcible and apposite.

"Mr. CARDWELL said, the hon. member for Montrose wanted to make out that adulterated coffee was just as good as pure coffee. The hon. gentleman had, perhaps, not been sworn at Highgate, and was therefore not bound to prefer the better to the worse article, (a laugh;) but it was extremely desirable that the House should not give parliamentary sanction to fraud; already there had been enough said in the House of Commons to encourage the roguish grocer, to discourage the honest trader, and which had occasioned a falling off in the annual consumption of 3,200,000 lbs. of coffee, and an annual falling off in the revenue of £80,000. It was time that the honest grocer should be told by Parliament that his neighbour, if a rogue, was at least not a rogue by authority of the House of Commons." (Hear.)

The absurdity of the Chancellor's talk about the necessity of employing "an army of excisemen," was well exposed. We would back the microscope of one of our Commissioners against Sir CHARLES WOOD'S entire "army of excisemen."

We warn the Chancellor at the Exchequer that in sanctioning the falsification of food, he is entering upon a course dangerous to public health and morality, injurious to the revenue and his own character and reputation. The members of the present Government are anxious to be considered as "Sanitary Reformers;" whether they will be justly entitled to such an honourable distinction remains to be seen. It will be of but little avail that air and light are admitted untaxed to our dwellings, or that pure water be brought to our doors, if at the same time the dishonest and avaricious trader be permitted to poison us through our food.

Should the Chancellor of the Exchequer persist in his present unwise and improper intentions, and refuse to rescind the "Treasury Minute" so loudly and justly complained of, we foresee much to apprehend. Already has Sir CHARLES WOOD'S conduct set on foot various schemes for the increased adulteration of food. The effects of this are particularly evident with respect to tea; this article is now very commonly and extensively adulterated. We have in our possession numerous samples of an article manufactured expressly for the adulteration of tea, which, while it resembles very closely the genuine commodity, does not contain a single leaf of tea. In particular, we possess samples of spurious tea made by the Chinese, in imitation of "gunpowder" and "scented caper." With these worthless and perhaps deleterious substances, ships have already been freighted, and as soon as the Chancellor's determination with regard to coffee becomes definitely ascertained, they will be poured into the market. The projectors of this scheme even entertain the hope that the article will be permitted to pass through the Customs without the payment of the usual duty, since, although it resembles tea, it is not tea. We trust we shall shortly be able to notify the rescinding of the obnoxious "Treasury Minute," and with that act we hope government patronage of the adulteration of food will for ever cease.

CHARGE AGAINST A MEDICAL PRACTITIONER.

A CURIOUS case has recently been tried at Gloucester, involving the reputation of a medical practitioner, Mr. SHELDON, of Cheltenham. It consisted of a charge of making improper examinations of a young girl, aged seventeen. At first the matter was heard before the magistrates of Cheltenham, where it was dismissed, the Bench stating it as their opinion that Mr. SHELDON left the court "without the slightest stain upon his character." The recent trial for an assault came on before a special jury of the most respectable character.

The only witness was the prosecutrix herself, who thus details one of the interviews with Mr. SHELDON, and which constituted part of the alleged assault:—

"He examined me on that occasion, and told me to come again on the following Tuesday, and I went again on the 16th. He told me to take my clothes off; I did take all off, but my under things, all but my chemise and my flannel; he then said, 'let that down.' I did

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let it down. Mr. Sheldon felt my bowels and my side. I did not let it further down than the middle of my stomach, and then he felt my bowels and my side. He felt my pulse, and said it was nineteen to the dozen. He said, how frightened you are! He asked me a great many questions about my family. I went on the following Tuesday, about ten o'clock: the woman servant let me in. I went into the surgery; an elderly person was there. Mr. Sheldon said to the woman, 'I must trouble you to go out.' She went out, and I remained there. Mr. Sheldon drew the blind down, and he then told me to take my things off. I said, 'What! again, sir?' He said, 'yes, again, and again; take it off, and don't mind me at all; don't be frightened at me, for I cannot tell you if you get better without.' I took off my dress, and said, 'Not take off my stays, sir, and other things?' He said, 'Yes, you must take the whole of it off, and don't mind me, any more than if yourself was in the room.' I did take off all but my under things. Mr. Sheldon said, Let that down: (that was, my flannel and under garment.) He had his hands on them. I said, 'I cannot let that down again, sir.' He said, 'Well, I cannot tell without.' He pushed it down at the same time with great force. I held it, but Mr. Sheldon pushed it down. I pulled it up again, but he again pushed it down; it was tied, but Mr. Sheldon's force slipped the string. I think it broke; yes, it did break, as he pushed it down. I did not wish him to push it down. When that was pushed down, I did not let it go out of my hand, but Mr. Sheldon held it down below my entire body, down to about my thighs, so that my person was exposed. I tried to pull it up. Mr. Sheldon felt my bowels and my side, and tried to take further liberties with his right hand."

Other acts of familiarity were said to have followed, but it was most remarkable that the girl described two or three other interviews with Mr. SHELDON in almost the same words as the above. Scarcely a word of alteration occurred in her description of the several meetings. It appeared that the girl consulted Mr. SHELDON as a dispensary patient, for a debilitated constitution, and pain in the side; and she had ulcers on both ancles, and other repulsive symptoms; but she averred that not only did these assaults take place, but that Mr. SHELDON was so smitten with her as to propose private meetings in the neighbourhood of Cheltenham, and even elopement to Bristol or Clifton, or a permanent connexion; Mr. SHELDON being a respectable married man, having a wife and family, and in an extensive practice.

A large number of professional and other witnesses were called, including the rector of Cheltenham, (the Rev. F. CLOSE,) all of whom bore the most explicit testimony to the honourable and upright character of Mr. SHELDON through a long series of years. While this evidence was proceeding, the jury expressed some equivocal signs of their desire to bring the case to a conclusion. The following was the termination of the trial, than which we have seldom seen anything more satisfactory:—

"Dr COLLINGS ROBINSON was called, but not answering immediately to his name,—

Mr. KEATING said, Really, my lord, I won't trouble the jury with any further witnesses.

Mr. JUSTICE PATTESON: It is quite unnecessary. Gentlemen of the Jury, I don't know what *you* think of this case.

The Foreman of the Jury: My Lord, we were just about to say that we would not trouble your lordship to sum up, as we have already agreed to give a verdict for the defendant, if that would be a proper course. I have further to say that we consider that his character is altogether unstained. (Cheering.)

His Lordship: I entirely agree with you, gentlemen, and I don't believe there is one word of truth in the charge from beginning to end. (Applause.) Mr. Sheldon will go out of this court without the slightest stain upon his character. No man would be safe, gentlemen, if these sort of stories were to be believed. You cannot place any reliance upon a witness who swears to conversations which took place time after time in precisely the same words. It is monstrous.

As defendant was leaving the court, the jurymen leaned over the side of their box, and shook him cordially by the hand."

Medical men must of course bear their share of slander and misrepresentation, but it does seem monstrous that on the unsupported evidence of a girl who, according to her own statement, goes again and again to be exposed and assaulted in a disgraceful manner, a respectable medical man should be put on his formal trial for such alleged offences. We cannot understand how a grand jury could have returned a true bill in such an absurd case.

However, the matter has been tried. Every medical man in the kingdom should congratulate Mr. SHELDON on the result, though in his case it could not have been otherwise than it was. There is not a practitioner to be found against whom similar accusations might not be foisted to-morrow, if persons wicked and designing enough to make such charges could be found. As is generally the case with falsehood, too much was attempted to be proved, and the clear-sighted judge at once saw through the trickery and improbability, not to say impossibility, of the charges advanced.

EDINBURGH COLLEGE OF PHYSICIANS.

THE College of Physicians of Edinburgh has just come to a resolution condemnatory of the practice of homœopathy, and calling upon any of its fellows or licentiates who may look with favour on that silly heresy to disconnect themselves from a body instituted for the cultivation and promotion of science. It is, we believe, well understood to be the purpose of the northern College to proceed against all such persons as may show themselves slow to understand what honour and truth require of them. They will be plainly and forcibly ejected. Nor will those be spared, who, in weak compliance with aristocratic caprice, and in order to steal a march upon their more sturdy and honest competitors, so far forget what is due to their education, their position, and their duty to their patients, as to countenance and meet in consultation the pseudo-medical tribe, who, under the gabardine of homœopaths, wait upon the weaknesses, and stoop to the humours, of pampered and idle men and women of the upper ranks of society. All honour to the College of Physicians of Edinburgh! We trust they will neither waver nor pause in their manly and honest course. It is time that the medical profession should rouse itself to vindicate both its character and its prop-

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erty. Toleration has gone far enough, and the evil but grows with impunity. We have in this metropolis, to a still greater extent than in Edinburgh, our impostors, and we regret to say also, our false brothers, who do us more injury than the quacks. Were the homœopaths invariably left in the difficulties into which their presumption and their dishonesty frequently lead them, their credit with the public would long ago have been destroyed. But when physicians of hitherto good name consent to meet such men, and thus vouch for the propriety of their proceedings, they are vastly aided in their scandalous and nefarious trade. We regret to think that in London, men attending members of the royal family have been singularly guilty in this respect.

We should be glad to hear that our own College of Physicians had roused itself to the evil which is stalking abroad. The monstrous alliances now proceeding between regulars and quacks might surely deserve the exertion of collegiate authority. The Edinburgh College will not, we trust, forget that there are great functionaries to be corrected. What is to be done with Dr. HENDERSON, the homœopathic Professor of Pathology in the University of Edinburgh, to the condign disgrace of the University and every other Professor, be it spoken? What sort of pathology does this man teach? If he teach the pupils of the University the ordinary and approved doctrines of physic, what becomes of his practice? If he teach them homœopathy, what excuse have the patrons for the toleration? In either case, "*Où l'honneur va-t-elle se nicher.*"

THE GREAT EXHIBITION.

On the 1st of May, Queen VICTORIA opened the World's Exhibition with great splendour. The highest of the land were in attendance on her, and princes and kings from afar contributed to the majesty of a procession, in which Nature seemed to take a willing part, for the first tender covering of green with which Spring clothes the grim skeletons of vegetable life awakened in every bosom the buoyancy of first hopes.

At the foot of the Crystal Palace a mimic man-of-war floated on the Serpentine, for which we have so often interceded, and in which, for once, the Woods and Forests had poured a sufficient supply of water. Placed there, perhaps, as an idle toy, it was nevertheless appropriately placed, as it told the reason of an Exhibition of the Produce of Industry of all Nations being possible in Hyde-park, and reminded Englishmen of what constituted their real power. On the whole scene of wondrous splendour, and on the hundreds of thousands assembled to partake of this national, this general festivity, the sun shone forth with a constancy hitherto unfailing whenever her Majesty greets the eyes of a right loyal people.

Was all this but an empty show—the last of the many pageants which have gratified the vulgar gaze of a gaping crowd? We think not; and that by wishing the inauguration of the Exhibition to take place with the pomp and majesty of royalty, the people testified the importance they attached to this first Jubilee of Commerce.

In the midst of doleful prognostications, and equally enthusiastic anticipations, it would be difficult to foretell the results of this important event. We may, however, safely admit—

First. That it will increase our knowledge of the natural products with which Providence has so abundantly covered the world.

Second. That it will tend to the improvement of manufactures, foreign and domestic.

Third. That it will knit nations more closely together in bonds of amity.

Such are the results generally contemplated from this extraordinary event; but we belong to a profession ever anxious to find out means of restoring to health, or to accomplish a higher aim—the prevention of disease. It would be a noble undertaking to deduce from the thousands of accumulated objects all that relates to improvement in our sanitary condition, in food, clothing, and in the structure of our dwellings; and also to place on record a full description of those artificial agents which the ingenuity of man has last invented to relieve disease and remove deformity.

THE PHARMACEUTICAL JOURNAL AND GLOBULISM.

EARLY in the present year some papers on Globulism appeared in the *Pharmaceutical Journal*, which, on account of their pungency, we are desirous of using in continuation of our remarks on this species of quackery. Our attention is particularly directed to them by the fact that one of our correspondents, Mr. WALTER BRYANT, with a public spirit which does him honour, has had five thousand of them printed and distributed at his own expense. We can hardly conceive a more certain mode of sickening the semi-insane followers of HAHNEMANN than by the details thus made public.

We need not say much about the homœopathic dishonesty of pretending to prescribe aperients infinitesimally, but giving strong aloetic paste; of giving strychnia and the other powerful alkaloid poisons in powerful doses in the guise of globules. One of the last-facts of this kind is, that Dr. TAYLOR, of Guy's Hospital, discovered no less than one-third of a grain of morphia in a homœopathic powder. The cunning rogues excuse themselves by declaring, that even when they give large doses of medicine, it is only the infinitesimal part of the dose which acts, the rest being homœopathically inert. It is not to absurdities of this kind, but to some of the disgusting and loathsome features of Globulism, which we now wish more particularly to direct attention.

We are assured by the editor of the *Pharmaceutical Journal* that a friend of his was recently requested by a homœopathic quack to prepare a "tincture of bugs," for internal administration, no doubt for the cure of some prurient malady. Homœopaths, in obedience to their formal dogma, give the poisonous matter of syphilis, largely diluted, as a cure for syphilitic disorders. They

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give gonorrhœal matter, diluted in certain efficient degrees, as a cure for gleet or blennorrhagia. As a remedy for the itch, these gentry use the scrapings of the skin of a person affected with the itch insect, diluted to the proper attenuation in sugar-of-milk. These are among the choice articles of the homœopathic Pharmacopœia, so called. Nice confectionary for our delicate aristocrats! Besides such matters, red ants, spiders, toads, lizards, cock-roaches, fresh-water crabs, and other interesting animals, are brayed alive in a mortar, and converted, by proper admixture, into most potent globules. The following is perhaps as good an instance of globulistic fraud and humbug as can well be adduced:—

A person poisoned by the rattle-snake has the tongue swollen to an enormous size—*ergo*, the poison of the rattle-snake is good homœopathically for diseases of the mouth and tongue. This medicine is professedly largely given, and it occurred to an acute friend of ours to ascertain if possible where all this rattle-snake poison was obtained. He first went to the Zoological-gardens, and found that at all events the globulists were not supplied by the reptiles domiciled in these institutions. He then went to a homœopathic *chemist*, (singular prostitution of the word,) and inquired for a small quantity of rattle-snake poison, wherewith to perform some toxicological experiments. The dispenser of globules at first refused, on the plea that he could not supply a stranger with such a deadly poison. A reference of an unexceptionable nature was instantly offered, and the ground was quickly changed. He was now advised to use some cheaper poison; that of the rattle-snake was so very dear; it would be such a waste of money.

But the ardour of our friend was not to be checked, and he at once offered a considerable sum for a very minute quantity of this precious poison. Thus brought to bay, the man of globules confessed he had no rattle-snake poison, and had never seen any. When pressed to name any house in London by which the homœopaths were supplied with this invaluable medicine, he admitted that he knew of none, but he had heard that it might be obtained in some of the cities of the United States of America! Of course the chemists must have some power of extemporizing this poison for their prescriptions!

These bestialities and knaveries are quite equalled by the absurdities of the globulistic humbug. The whole homœopathic confraternity in London were thrown the other day into intense consternation, by discovering that their principle "chemist," in the neighbourhood of Hanover-square, took snuff, and that, notwithstanding every precaution as regards cleanliness in his sternutations, the particles of snuff commingled with his globules, and rendered them wholly inefficient and at cross-purposes. But some of these quacks practise olfaction extensively. It is too much to take the potent globules, but a globule is passed before the nose of the patient three or four times a day, the globule being placed for protection in a glass tube. We can imagine what agonies these homœopaths must suffer at the contemplation of the enormous quantities of homœopathic drugs we must swallow in our daily life, and imbibe from food, and air, and raiment.

Swift died too soon. Oh that he were alive to castigate the follies of this period, and that the pens of Fielding and Smollett and Sterne might be re-set in irony for such a grand occasion. We are in some sort fallen upon evil times, for, strange to say, our Bulwers and other kindred spirits, by some extraordinary chance, are the patrons and abettors, rather than the satirizers, of this form of mischief, humbug, and knavery.

RECORDS OF THE RESULTS OF

MICROSCOPICAL AND CHEMICAL ANALYSES

OF THE

SOLIDS AND FLUIDS

CONSUMED BY ALL CLASSES OF THE PUBLIC.

MUSTARD,

AND ITS ADULTERATIONS.

The plants from which mustard is obtained are, *Sinapis nigra*, or black, and *Sinapis alba*, or white mustard: they belong to the natural family *Cruciferæ*.

The black mustard-plant is distinguished by its seed vessels, which are smooth, and the colour of the seeds themselves, which are reddish, or blackish brown.

In the white mustard-plant the seed vessels or pods are clothed with hairs, which render them rough, and the seeds are yellow.

The two species of mustard differ in properties as well as in botanical characters.

The seeds of *S. nigra* are more pungent than those of *S. alba*, but there are other differences.

Analysis has detected in black mustard-seed several distinct chemical compounds—*Myronic acid*, *Myrocyne*, *a volatile oil*, and *a fixed oil of mustard*.

Myronic acid is an inodorous, non-volatile, bitter, and non-crystallizable substance, containing nitrogen and sulphur, and forming bases with salts. The characteristic property of this substance is, that it yields, with myrocyne, the volatile oil of mustard.

Myrocine, the *emulsin* of black mustard, yields, as already noticed, with myronic acid, the volatile oil of mustard. "It has considerable resemblance to vegetable albumen and emulsin, but as it cannot be replaced by either of these substances in the development of the volatile oil, it must be regarded as a substance *sui generis*. It is soluble in water; but is coagulated by heat, alcohol, and acids, and in this state it loses the power of acting on the myronates, and of yielding the volatile oil."—Pereira.

The *volatile oil of mustard* does not pre-exist in black mustard-seeds, but is formed, as already observed, by the mutual action of myronic acid and myrocyne in cold or warm water; it is this oil which gives to mustard its penetrating odour, sharp burning taste, and its acrid, rubefacient, and vesicant properties; it contains nitrogen and sulphur in its composition.

The above details are of practical interest and importance, for since heat coagulates myrocyne, and this substance is necessary to the formation of the volatile oil upon which the greater part of the active properties of mustard depends, it is clear that water,

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either cold or warm only, should be employed in the mixing of mustard.

The *fixed oil of mustard* is usually procured from the siftings or dressings of mustard, which consist mainly of husk: it is stated to constitute about twenty-eight per cent. of the seeds.

Of the composition of white mustard we find the following account in Pereira's "Materia Medica."

"Robiquet and Boutron, (*Journ. de Pharm.* xvii. p. 279,) however, have proved, that white mustard contains neither volatile oil, nor any substance capable of producing it, but owes its activity to a *non-volatile acrid substance*, which does not pre-exist in the seeds, but is readily formed in them under certain conditions. Another chemical peculiarity of white mustard is, that it contains *sulpho sinapisin*. (Henry and Garrot, *Journ. de Chim. Méd.*, i. 441.) Hence, while sesquichloride of iron strikes a deep red colour in an infusion of white mustard, it merely communicates an orange tint to the infusion of black mustard. Moreover, the thick mucilaginous liquor obtained by digesting the seeds of white mustard in cold water is peculiar to them. (Cadet, *Journ. de Pharm.*, xiii. 191.) Simon (*Journ. de Pharm.*, xxv.) has announced the existence of a new principle, which he calls *erucin*."

The young or seed leaves of white mustard are used for salad.

Both species are indigenous, and may commonly be seen in flower, in the month of June, in waste places and fields. In the brick fields in the neighbourhood of Notting-hill, they grow in great quantities.

M'Culloch's "Commercial Dictionary" contains the following interesting particulars in relation to the growth &c. of mustard:—

"It was formerly extensively cultivated in Durham, but it is now seldom seen in that county. At present it is principally raised in the neighbourhood of York, and throughout other parts of the North Riding; and being manufactured in the city of York, is afterwards sold under the name of Durham mustard. Two quarters an acre are reckoned a good crop. Mustard is of considerable importance in the materia medica, and is extensively used as a condiment. It was not, however, known in its present form, at our tables, till 1720. The seed had previously been merely pounded in a mortar, and in that rude state separated from the integuments, and prepared for use. But at the period referred to, it occurred to a woman, of the name of Clements, residing in Durham, to grind the seed in a mill, and to treat the meal in the same way that flour is treated. Her mustard was, in consequence, very superior; and being approved by George I., speedily came into general use. Mrs. Clements kept her secret for a considerable time, and acquired a competent fortune. In Bengal, and other eastern countries, mustard is extensively cultivated, as rape is in Europe, for the purpose of yielding oil." (Bailey's Survey of Durham, p. 147; Loudon's Encyclopædia of Agriculture.)

It is much to be desired that a few persons equally conscientious with Mrs. Clements were engaged in the present day in the manufacture of mustard.

The subjoined particulars, in reference to the manufacture of mustard, as furnished by a manufacturer, are given by Pereira:—

"The seeds of both black and white mustard are first crushed between rollers, and then pounded in mortars. The pounded seeds are then sifted. The residue in the sieve is called *dressings*, or *siftings*; what passes through is *impure flour of mustard*. The latter, by a second sifting, yields *pure flour of mustard*, and a second quantity of dressings. By pressure, the dressings yield a fixed oil, which is used for mixing with rape and other oils."

Structure of Mustard-Seed.

Every entire seed consists of two parts, the husk and the seed proper.

The husk of white mustard-seed is constituted of three distinct membranes.

The *outer* membrane is transparent, and mucilaginous: it consists of a layer formed of two different kinds of cells of large size and very peculiar structure; those of the first kind are of an hexagonal figure, and united by their edges so as to form a distinct membrane, the centre of each cell being perforated; the cells of the second kind occupy the apertures which exist in the previously-described cells, and they are themselves traversed by a somewhat funnel-shaped tube, which appears to terminate on the surface of the seed; immersed in water, these cells swell up to several times their original volume, occasion the rupture of the hexagonal cells, and become themselves much wrinkled or corrugated, the extremity of the tubes in some cases being seen protruding from the proximate termination of the cells.

It has been noticed that when white mustard-seeds are digested in water, a thick mucilaginous liquid is obtained; the source of the mucilage does not appear to have been pointed out, it is certainly, however, derived from the cells forming the tissue above described.

The *middle* tunic consists of a single layer of very minute cells, of an angular form; it is in the cavities of these that the chief part of the colouring matter possessed by the husk is seated.

The *inner* membrane also consists of a single layer of angular cells, which, however, are several times larger than those constituting the middle tunic.

The *seed* itself is of a bright yellow colour, and of a soft, waxy consistence, which arises from the quantity of oil it contains; it consists of innumerable very minute cells, in the cavities of which the oil and other active principles are contained.

Notwithstanding the terms "flour" and "farina" of mustard commonly employed, ripe mustard-seed does not contain a single starch granule, as may be ascertained by means of iodine and the microscope.

In black mustard-seed, the outer membrane consists apparently of only the hexagonal cells, which form a distinct but thin membrane, constituted of two or three layers or cells; in other respects the structures resemble those of white mustard-seed.

Adulterations of Mustard.

We find the celebrated author of "Death in the Pot," in the year 1820, publishing the following observations in reference to the adulteration of mustard:—

"Genuine mustard, either in powder, or in the state of a paste, ready for use, is perhaps rarely to be met with in the shops. The article sold under the name of *patent mustard* is usually a mixture of mustard and common wheaten flour, with a portion of cayenne pepper, and a large quantity of bay-salt, made with water into a paste ready for use. Some manufacturers adulterate their mustard with radish-seed and pease-flour.

"It has often been stated that a fine yellow colour is given to mustard by means of turmeric. We doubt the truth of this assertion. The presence of the minutest quantity of turmeric may instantly be detected by adding to the mustard a few drops of a solution of potash, or any other alkali, which changes the bright-yellow colour to a brown or deep-orange tint.

"Two ounces and a half of cayenne pepper, a pound and a half of bay-salt, eight pounds of mustard-flour, and a pound and half of wheaten flour, made into a stiff paste, with the requisite quantity of water, in which the bay-salt is previously dissolved, forms the *patent mustard* sold in pots. The salt and cayenne pepper

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contribute materially to the keeping of ready-made mustard."

Professor Brande,* in 1839, writes—

"The bright-yellow powder, sold under the name of *flour of mustard*, and used at the table, is a compound of powdered black and pale mustard-seed, cayenne pepper, wheat-flour, and turmeric."

Dr. Ure, in his "Dictionary," published in 1844, describes two receipts for the manufacture and adulteration of mustard.

"M. Lenormand gives the following prescription for preparing mustard for the table:—

"With two pounds of very fine flour of mustard mix half an ounce of each of the following plants:—Parsley, chervil, celery, and tarragon, along with a clove of garlic, and twelve salt anchovies, all well minced. The whole is to be triturated with the flour of mustard till the mixture becomes uniform. A little grape-must, or sugar, is to be added, to give the requisite sweetness; then one ounce of salt, with sufficient water to form a thinnish paste by rubbing in a mortar. With this paste, the mustard-pots being nearly filled, a red hot poker is to be thrust down into the contents of each, which removes (it is said) some of the acrimony of the mustard, and evaporates a little water, so as to make room for pouring a little vinegar upon the surface of the paste Such table mustard not only keeps perfectly well, but improves with age."

"The mode of preparing table mustard patented by M. Soyer, consisted in steeping mustard-seed in twice its bulk of weak wood vinegar for eight days, then grinding the whole into a paste in a mill, putting it into pots, and thrusting a red hot poker into each of them."

According to Mitchell: "The substances employed in the adulteration of this condiment are not generally injurious to health, they only weaken the strength of the material. Pea-flour, ordinary flour, and linseed-cake, ground very fine, with turmeric powder as a colouring matter, are the bodies used in weakening the usual pungency of mustard. The mineral substances are, yellow ochre, and, as I have been informed, chromate of lead in small quantities, to give a bright yellow to mustard that has had much coloured vegetable matter, as linseed-meal, added to it. I have never found chromate of lead in any sample I have examined, although I am assured that it is occasionally employed.

"The best method of detecting pea-flour, ordinary flour, linseed-meal, &c., is, to take a given weight of mustard-seed, and pulverize it finely, add to it ten times its weight of water, and mix well together. Take the same quantity of the mustard to be examined, and add to it the same amount of water as before, (ten times its own weight.) It will now most likely happen that the mixture of water and powdered mustard-seed will have a much more pungent taste than the other; if so, water is to be added, until both taste alike; from the quantity of water added, the probable amount of adulteration may be approximately obtained. This is, however, not an absolutely decisive test, but it is the only one with which I am at present acquainted, that is readily performed."

It is really marvellous that any persons writing in the present day on the falsification of food should have so overlooked the application of the microscope to the detection of adulteration, as have Messrs. Mitchell and Normandy, the two most recent English writers on the subject. The method pointed out by Mr. Mitchell for the detection of the admixture of pea-flour, linseed-meal, wheat-flour, &c., is puerile.

According to Pereira, "*The common flour of mustard* of the shops is adulterated with flour (wheaten,) coloured by turmeric, and rendered hot by pod pepper."

Normandy, in his "Hand-Book of Chemical Analysis," does not notice mustard or its adulterations at all.

Adulteration with Radish Seed.

It has been stated that radish-seed is sometimes employed in the adulteration of mustard; this we are disposed to doubt, for the retail price of radish-seed, usually a shilling a quart, renders it much too dear for this purpose.

In structure, radish-seed resembles very closely black mustard-seed; two of the membranes and the substance of the seed itself are very similar, so that, if used, it would be extremely difficult to detect.

Adulteration with Rape-Seed.

Rape, unlike radish-seed, is very cheap, and it is therefore possible, that in some cases it may be used to adulterate mustard; we do not, however, think that it is so frequently; because an article not less cheap is commonly employed, which probably better answers the purpose.

Rape also resembles black mustard seed very closely in structure.

Adulteration with Wheaten Flour.

The characters of wheaten flour have been already more than once partially described; in our next Report, these characters will be considered more fully.

Immense quantities of wheaten flour are employed in the adulteration of mustard, and many samples almost entirely consist of it.

It has been stated that pea-flour is sometimes used; out of fifty samples of mustard which we have submitted to examination, we have not met with a single instance of adulteration with any other farina than wheaten flour.

Adulteration with Turmeric Powder.

Turmeric powder is the ground tuber of the *Curcuma longa*, one of the *Zingiberaceæ*; it is of a dark yellow colour, and consists of large cells; some of these are loosely imbedded in a reticular tissue, but others, and these the majority, are quite free; they may be recognised with facility, under the microscope, by their size and bright yellow colour.

When crushed, each cell is found to contain colouring matter, as well as a number of starch-granules, resembling closely those of Curcuma arrow-root.

On the application of iodine the cells become of a deep-blue, and with potash, of a reddish colour.

Although we have examined a large number of samples of mustard, in no instance have we found turmeric powder to be absent.

By some means or other—probably by moisture and heat—the turmeric powder is made to part with a portion of its colouring-matter to the flour which enters so largely into the composition of the mustard of the shops.

Adulteration with Pod or Capiscum Pepper.

It is stated that pod-pepper is commonly present in mustard: we have diligently searched for it, but have not hitherto detected it in any sample.

DINNER TO SIR C. M. CLARKE.—Yesterday, May 27, about 160 medical men attended the dinner at Willis's Rooms, given by them to Sir Charles M. Clarke, in testimony of their respect and regard. The day was selected as being the anniversary of his birth. Sir Henry Bishop conducted the musical arrangements, and presided at the pianoforte, and some eminent male and female vocalists contributed signally to the amusements. Amongst other songs, was an appropriate one written expressly for the occasion, by Dr. Badeley. Sir P. Brodie was in the chair, and the party did not separate until a late hour.

* Dictionary of Materia Medica and Pharmacy.

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Miscellaneous Correspondence.

"Audi alteram partem."

ON FEES FOR THE ATTENDANCE OF MEDICAL MEN IN COURTS OF LAW, AND THE TREATMENT OF THE PROFESSION THEREIN.

To the Editor of THE LANCET.

SIR,—My attention has been for some time directed to the above subject, in which I have had some experience, having repeatedly attended in civil and criminal cases, at the assizes at Newcastle, Durham, Carlisle, and York.

A statement recently made by Judge Martin has brought the indignation which I have long felt to a climax. According to him we can be compelled to leave our practice, and attend in courts of justice, without any special remuneration I hope that, for the honour of the bench, his lordship deplored this state of things. Our attendance can only be confounded with that of ordinary witnesses, through sheer stupidity, or a determination to vilify and degrade the profession. We almost invariably attend to give the results of our professional study and skill, as much in the exercise of that by which we are to live, as any barrister in the court. Is it to be tolerated that a medical jurist, no matter how distinguished, may be forced to communicate the fruits of his toil without special remuneration? Yet such we now know to be the case. In this respect, as in many others, we are the thralls and serfs of the public, who may be *impressed* and oppressed, employed without remuneration, and plundered without consideration or pity.

The science of medical jurisprudence, which is the safeguard of the public, has been created, not by lawyers, but by medical men; and frequently in a criminal trial, the medical witness is of more real importance and utility than judge, barrister, and jury put together.

Allow me to elucidate these general remarks by some facts taken from my own experience: and first, with regard to the remuneration; secondly, the treatment.

First. Some years ago I was sent for to make a post-mortem of a man named Hornsby, who had died at Haltwhistle, in Northumberland, about forty miles from Newcastle, under suspicion of having been poisoned. I found the post-mortem results confirmatory of these suspicions; I then made an analysis of the viscera qualitative and quantitative, for arsenic, which I detected and determined. I was again sent for to Haltwhistle, to give evidence before the magistrates, and again to attend an adjourned inquest. I consider that my remuneration for this work should have been, under a proper system, at least,—

For three visits to Haltwhistle, (in all, 240 miles,) attendance, and expenses	£18 18 0
For analysis, &c.	15 15 0
	£34 13 0

☞ The coroner, Mr. Reed, showed every desire to do me some justice, and allowed me the fee of twenty guineas, which letters from Professor Christison, Professor Taylor, Dr. Brett, of Liverpool, and Professor Johnston, stated was a very moderate charge; but the county magistrates refused to allow more than the legal fee of two guineas, which would not more than half defray my travelling expenses!

I was so indignant that I contemplated *bolting* from York assizes, where I had to attend a civil case, among the Yorkshire hills, with my fishing-rod, leaving the woman accused to be tried at Newcastle without me, in order to protest thus against such monstrous injustice; and I should most certainly have done so could I have afforded to pay the heavy fine that would most likely have been inflicted After the trial the matter was brought by the solicitors in the case (Messrs. Carrick and Lee, of Brampton, who were most anxious to do me justice) before the judge, (Wightman,) who, in the most handsome manner, ordered the county to pay me twenty guineas, in addition to three guineas for attendance before the magistrates at Haltwhistle, four guineas for attending the court, and two guineas for the inquest, so that I received twenty-nine guineas. The same judge, I may mention, in another trial, acted to me in a similar way, and did it with compliments.

But suppose the case had not come to a trial, or that the judge had not been a man of the same just and liberal mode of thinking; I should have been mulcted of skill, time and money, for the benefit of the public.

In a recent case I had to make an analysis of the most difficult kind; literally to stew down half a body, as Orfila in the case of Laffarge, to get a result, and to attend at Sedgefield, thirty miles off. There the coroner got me a fee of ten guineas, but the law would have only allowed two guineas. I have corresponded with other medical men who are often engaged in such cases, and find them all complain bitterly of the inadequate and uncertain remuneration.

But Judge Martin says we are entitled to none at all for our professional services in courts of justice. Was there ever anything so monstrous?

Secondly. Another thing of which the profession has too often to complain, is the grossly uncivil treatment we so often meet with. By the way, perhaps Judge Martin may not recollect an arbitration case at Newcastle, where the writer of this letter was asked by a *Mr.* Martin, whether he "would give a horse a pounded paving-stone in its water to drink?" and the answer, "No, Sir; nor ask such a foolish question!" I was once examined by a barrister, who absolutely *acted* a deliberate falsehood, in order to induce me to hesitate in my evidence. He was cross-examining from Taylor's "Medical Jurisprudence;" and asked if the precipitates yielded by sulphuretted hydrogen with salts of antimony and tin could be distinguished from that furnished by arsenic. I said "Yes." He looked for some time at the book, and as if he pretended to find there what he did not find, said, in a triumphant tone,—"Do you you *still* mean Sir, to tell me that!" Answer, "Yes!"

I was informed some time ago, that a judge asked an eminent physician, who was a witness against a quack then being tried for manslaughter, and who had refused to meet this quack in that very case, why he would not go?—"Because it was contrary to medical etiquette" "What do you mean, Sir, by medical etiquette?" The answer should have been,—"Why, there is an etiquette *even* in your profession." I should have added, that the quack was of course acquitted; and on his return to the place where the atrocity for which he was tried had been perpetrated, carried, I believe, in a triumphal procession.

We never go into court as hired sophisticators, or arrogant bullies, or the calumniators of innocence and defenders of guilt; but as the witnesses and real ministers of science, truth, and justice.

In conclusion, I hope that the profession will, as one man, petition Parliament to regulate on a proper scale the fees to which we are entitled for our services in cases of legal medicine. Travelling expenses should be provided for, and at least five guineas a day for attendance in court. Chemical analyses should be paid for still more handsomely in criminal than in civil cases. Fees of ten, twenty, or thirty guineas should be allowed, instead of the sum of two guineas. In civil cases we can generally make our own bargain; and people will pay much more freely for the defence of their pro-

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perty than the protection of their health and the saving of their lives.

Yor obedient servant,
R. M. Glover.

GRATUITOUS-ADVICE QUACKERY.

To the Editor of The Lancet.

Sir,—Among the numerous articles that have appeared on the above painful subject in the medical journals, I do not think that any of them have alluded to what I conceive to be one great cause of the unfortunate position of too many of our professional brethren; I allude to the practice, too general with physicians, of giving gratuitous advice indiscriminately to all who may apply for it. This has really become a monstrous evil, and one that deserves our most serious consideration. Were this aid merely confined to the really poor, no one could complain, although even there it is uncalled for, as they have the portals of our numerous medical charities open to them, or the assistance of the parochial surgeon; but as the case now stands, in how many instances do we see people occupying respectable positions in society as substantial tradesmen, perhaps living in their own houses, condescending to accept a gratuitous opinion, and, *proh pudor!* a physician, *knowing them well as such*, not ashamed to afford it to them, for the chance of the commission given by the dispensing druggist, whom he directly or *indirectly* patronizes. Or when his character and status may be too high to suspect such a degradation for the doubtful reward of the good word of these voluntary paupers, and the admiration of the more thoughtless portion of the public, who do not consider that the man whose generosity they laud in giving them an unbought opinion is the means of depriving of *daily bread* the perhaps equally well educated general practitioner, too often hampered with the claims of a wife and family. If the advice-gratis physician would bring this reflection to mind, when he contemplates the testimonial (which in this age of testimonials) may have been presented to him by the joint contributions of knowing druggists and equally wide-awake patients, would it, I say, add to his pleasure to consider that it was the paltry reward he had received for affording gratuitous aid to swarms of people, in most instances, well able to pay him a fair remuneration for his services, regardless of the remonstrances of his professional neighbour, and regardless also of the bitter tears and heart-rending anxieties he causes in that neighbour's care-stricken home. Now, may I ask, who benefits by all this? The druggist only, I conceive, who already trenches in every possible way on our practice, certainly not the physician himself; at least in no case have I seen an "advice gratis" doctor establishing himself either in respectable family or consulting practice. The reason of this is, that the public imagine that what can be obtained for nothing is seldom worth much, and general practitioners of course avoid calling in the man who is their bitter enemy. If I am not too tedious, I will give a case in point. In a cathedral town have long dwelt two M.D.'s; both are men of considerable talent; the one gives gratuitous advice to all, and takes every opportunity of affecting to scoff at and undervalue the general practitioner; he has little or no consulting practice, or indeed practice of any description that he can earn a guinea by. But now mark the contrast. The other never gives a gratuitous opinion, except at the *request of a medical man*, when the patient is too needy to pay for it. He invariably treats his professional brethren with courtesy, strict etiquette, and honour, and they reward him nobly, as his honoured presence is required at every important consultation, and an income of some thousands a year is a proof of the respect in which his talents and high principles are held by a discerning public and a host of professional friends and admirers. Then let us unite, and resolve, never to call in or in any way countenance an "advice-gratis" doctor. I am confident that this would work a cure, and improve our prospects materially, and the numbers of young men who are now thrust into the profession (apparently with no other aim than to condemn them to a life of hopeless poverty and despair) might have a chance of earning a living. I repeat that this is a widely-spread and intolerable evil, not confined to the young M.D., in whom it might be pardoned, (he erroneously thinking that it would one day bring him more profitable practice,) but it is also the custom of many physicians who can have no such excuse, not only to give gratuitous advice, but even to attend patients (frequently very well off) at their own dwellings on the same easy terms. I fear I have been too prolix on the subject; but it is a most important one to us all, and I hope that neither you yourself will allow your powerful pen to remain idle in such a cause, nor that your numerous correspondents, now that I have brought the matter forward, will be satisfied until some reform is at least attempted.

I am, Sir, yours, &c.,
A Provincial Surgeon.

*** This subject is not now noticed for the first time in the columns of The Lancet, as it has very frequently engaged our attention. The remedy, as our correspondent suggests, rests with the profession.—Ed. L.

THE GOLD USED BY DENTISTS.

To the Editor of The Lancet.

Sir,—In a paragraph in the *Times* lately, entitled "The Gold Used by Dentists," it was stated that the impure metals and bad gold used for plates for the mouth were productive of great disturbance to the health, being often converted into poisonous oxides; and the writer suggests as a remedy for such practice, that every plate should be *Hall-marked* in the same manner as gold watch-cases, &c. This plan might do—but how is it to be enforced? as a vast many ignorant, vain persons will suffer anything rather than expose what they are pleased to call "their misfortune," or as they ought to designate it, their "childish weakness!" The loss of teeth is indeed a great annoyance, as affecting personal comfort and appearance, but still there is not, therefore, any absolute necessity that unprincipled charlatans should aggravate the evil by using base metals.

Respectable dentists use eighteen carat gold, which is good enough to be stamped. They could not use it pure, from its extreme ductility, as plates made of it in the latter condition would bend. But even the very best gold that is used, however slightly alloyed, will often induce a perceptible galvanic action in the mouths of individuals of a strumous habit.

It is therefore not suprising that the "Cheap-Jack Advertisers" should not be very particular as to the quantity of alloy they use; some of their dupes suffer such a constant abnormal secretion of saliva, that it becomes a chronic ptyalism; and if the plates in this state are examined, they are found coated with a green oxide of copper!

The remedy for this class of evils is of a two-fold kind: that there should be more real knowledge disseminated among the people, and a College of Surgeon-dentists, so as to enable the public to distinguish the respectable man from the mere charlatan.

I am, Sir, yours, &c.
J. Levison.

Devonshire-place, Brighton, April, 1851.

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IRISH EMIGRATION SHIPS.

To the Editor of THE LANCET.

SIR,—In consideration of your position as an influential member of Parliament, as a member of the medical profession, and editor of a powerful medical publication, I take the liberty of bringing before your notice the different ways in which emigration is conducted with respect to our poor Irish subjects and the "men and brethers" of the "coast." Often has it been said and written that the poorer class of Irish are worse off, in point of all physical comforts and necessities, than the Africans, either in Africa itself, in Brazil, or the West Indies; but in the instances I am about to give, you will see, Sir, how carefully and scrupulously the authorities watch over the cleanliness, the food, and health of African emigrants, and how grossly, shamelessly,—nay, sinfully, they neglect the poor Irish.

On the 17th of this month, the ship *Ottilia*, from Liverpool, arrived at this port, having been obliged to put in here in consequence of a mutiny among the crew, twelve of whom refused to obey orders, in consequence, as they said, of bad provisions; however, this is partly foreign to the subject.

The ship *Ottilia* had 429 *adult* Irish emigrants on board, or 470, including men, women, and children; and I assure you, Sir, there was not one medical officer on board, because, it was said, it was only an eight weeks' voyage. Such being the case, no attention whatever was paid to their health, comfort, and cleanliness. The lower deck, upon which they ate and slept, had never been washed since they left England (forty-three days), and what is more, would not be washed until they were landed at New Orleans! And why? Forsooth, because there was a cargo of loose salt below it, which cargo was more valuable to the owners than the live cargo above; consequently, it was of less importance that the crew should be dirty, than that the salt should be clean.

The poorer class of Irish are never proverbial for cleanliness under the most favourable circumstances; but here dirty and slovenly habits are actually forced upon them. Fancy, Sir, 470 people, men, women, and children, eating, drinking, and sleeping on a deck which had never been washed, or on bedding which had never been aired, or in clothing which had never been changed. In the hold of that emigrant ship, men and women, husbands and wives, brothers and sisters, boys and girls, the sound and the sick, were hudd ed up *promiscuously* in cribs of eight or ten during the night; and in the same place, among the remnants of broken meat and stale pipes, with uncombed hair and naked feet, they lolled, rolled, or strolled about during the day, except when they were started on deck by the seamen when they happened to be in their way; and on deck probably their lazy listlessness might induce them to remain until they might again be started down.

Whether this vessel lost any hands coming out, I know not; it is more than probable that she did. This I know, however, that three died during the short time that she remained here (five days), and that these three never received any medical advice; that one old man was sure to die soon after she left; that many appeared to be suffering and feverish when I made my casual visit, and that one poor fellow, an Italian, was likely to be a ghastly nuisance for life from the want of timely surgical assistance.

So much for the way in which Irish emigrants are cared for. Now let us see how the Africans fare.

On the 27th of March, the *Glentanner*, a 650-ton ship, arrives here from St. Helena, in thirty days, with 374 negroes, men, women, and children. They are *not* cribbed in to sleep upon frousy beds, but sleep upon clean mats on the *clean* deck; they have provisions on the scale of the royal navy; they are made to wash every morning; they enjoy an airing every day; they have a medical officer, vested with power to make them comfortable, and whose interest it is to keep them healthy. The women and children are separated from the men; the sick are separated from the sound; they have "hospital comforts;" and they all look clean, fat, and happy. Here you see plump African beauties, with diadems composed of beads and shells, encircling a head of hair which is beautifully curled, if not combed; here you see lively black urchins, who bow, grin, and show their white teeth, when you look at them, and smile and say "Yes, sir," when you speak to them, and might say more, if they knew how. How different this from the abject listlessness, the vacant, gaping stare, the matted locks of the poor, the despised, the neglected, Irish emigrants who were brought over for one pound sterling per head, to die of fever and starvation at New Orleans. The Government, I believe, provide in some way that these emigrants should be fed, but one pound for an adult, or for two children, is all that comes into the owner's pocket; yet six pounds or six pounds ten shillings is the contract price for each adult *black* who is *landed* under the auspicies of the "Colonial and Land Emigration Company." Only ten blacks died during the passage, and I was assured these were sick when they came on board.

Vouching, Sir, for the truth of what I have above stated, and hoping it may receive your consideration and that through you better treatment and attention may be afforded for poor English and Irish emigrants, I beg leave respectfully to subscribe myself,

A NAVAL SURGEON.

Port Royal, Jamaica, March 28, 1851.

CHOLERA IN JAMAICA.

To the Editor of THE LANCET.

SIR,—As the accompanying extracts from letters from Jamaica, on the subject of the cholera, may interest your many readers, I am happy to be permited to furnish them to your publication.

I remain, yours faithfully,
JAMES BOWEN THOMPSON, M.D.

I am indebted to the Lord Bishop of Jamaica, now in town, for the accompanying note and report, in which his lordship says, "that in Dr. Stewart's returns of the cholera at the churches and schools in the archdeaconry of Surrey there are a few remarks, which, I think, may be useful to you. I wish they were of a more statistical value. It will be very difficult, if at all possible, to obtain any such correct return, at a time when from sixty to seventy unc offined corpses were being buried in one large pit. Our friend the Rev. Mr. —— had often to perform this heartrending duty, surrounded by agonized friends and survivors; and in many places the negro huts are so scattered, that it is scarcely possible to render them all the necessary attention. I subjoin the extract and statistics. They are as follow—viz.

Cholera in Jamaica—1851.

"Kingston, 4½ square miles: The population of this district is estimated at 35,000; the city and parish lost about 4000.

Port Royal, 57 square miles: About 180 were carried off by cholera in the Penitentiary. Port Royal suffered very severely from the disease.

St. Andrew's, 120 square miles: The cholera was very destructive in this parish also.

St. David's, 24 square miles: This parish suffered likewise very much from the last visitation of cholera.

St Thomas-in-the-East, 215 square miles: The population of this parish greatly reduced; 900 deaths are reported from one district.

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Portland, 139 square miles: The curate reports the loss of several of his congregation.

St. George, 120 square miles: Many lives were lost in this parish.

Metcalfe, 61 square miles: The cholera visited this parish also.

During the prevalence of the cholera on the island, the Rev. Dr. Stewart deemed it necessary to suspend the operations at several of the schools, such as Portland, St. Andrew's St. David's St. Mary's, &c."

The bishop, in addition to furnishing me with the foregoing facts and extracts from Dr. Stewart's letter, kindly informed me that on this last visitation of the cholera to Jamaica, it is remarkable that it is the only one of the West India islands visited; and on a former occasion, now some years ago, the island of Havanna was the only one visited. It is also remarkable, his lordship observes, that on this occasion the Coolies, or emigrants from Calcutta and India, generally appeared to be comparatively exempted from the invasion of the disease; whereas, when the disease visits and prevails in their own country, they suffer more from it than the Europeans. This latter fact is very interesting, and confirms the observations made by myself in the East, where it was found that natives of Circassia, Nubia, and Abyssinia, who are employed in the houses of the Turkish nobility and wealthy Moslem merchants, are comparatively less predisposed to the invasion of a prevailing epidemic in Turkey than in their respective climates. It is not easy to say to what we are to attribute this exemption in the latter cases, as also in that of the Coolies in the West Indies on this late occasion, unless to some influence the change of climate exerts on the constitution of these people, some change in diet, habit, &c.—J. B. T.

Extracts from Jamaica Letters, March 22, 1851.

From letters of the latter end of March, just received, it appears there were apprehensions entertained that this awful scourge was about to revisit the island. The disease did not by the latest accounts extend far into the interior of the island, and Westmoreland escaped, and was so far an exception. The writer of this letter says—"I this morning received by post a letter from a young clergyman in Spanish Town, and I send you the particulars, as the information will interest you:—'the cholera is raging fearfully in St. John's, (fifteen miles from us,) and at St. Thomas-in-the-Vale worse than it was at first. Great fears are entertained of its breaking out here again; and should it do so, it will, it is to be feared, decimate the poor people in their present condition. We are as yet all well, but we are having wet, damp weather, which is very apt to produce cholera.' This will show you it has not yet quitted the island; it lingers in Hanava, but the Cove estate has been also wonderfully preserved."

Extract from Letter from Black River, St. Elizabeth's, March 22, 1851.

"Poor Jamaica has been sadly afflicted; it is quite impossible for me to describe to you the dismay, consternation, misery, and destitution that the cholera has caused throughout the length and breadth of the land. Black River, with the exception of Savanna la Mar, has suffered less than any town or village in the island, although we have lost one hundred and nineteen out of a population of less than one thousand. Port Maria, St. Ann's Bay, and Lucia, have been almost depopulated."

"Hanover.—Lucia.—The cholera is abated, but we are apprehensive that it may break out again with the setting in of the spring rains. This seems to be the opinion of Dr. Parkin, who had charge of the cholera patients near St. Bartholomew's Hospital in 1849, and whom you probably will recollect. His mode of treatment has been with soda, or rather with carbonic acid gas, and apparently most successful, except in the more malignant cases, where the sufferers are carried off in from four to twelve hours. These cases I hold to be totally incurable by any means. Vast numbers were thus carried off during the visitation in this town and neighbourhood without any premonitory symptoms. Up to this date, March 10, there are still occasional cases in this neighbourhood. Montego Bay has been revisited with five or six cases."

Remarks on the foregoing extracts.—It appears that there are some lingering cases of the cholera still in Jamaica, and that the spring rains were likely to be accompanied or followed by a return of the epidemic. This has been the case on more than one occasion in tropical countries. It has been remarked to recur at the spring rainy season in Egypt and Syria on former occasions, more especially on the coast, and less so in the interior. In the spring of 1850 some cases appeared on the coast of Egypt and Syria, but it did not extend inland, though it prevailed in the towns and cities and villages in the interior in the previous autumn of 1849. The mode of treatment adopted by Dr. Parkin I hope to be more fully prepared to furnish shortly. It is worthy of remark that the cholera appears to have carried off many persons who had none of the premonitory symptoms, and so far similates the cases reported by myself from the epidemic visitation of August, 1849, in Damascus, and published in the *London Medical Gazette* for March last. The symptoms of the disease noticed in this last visit to Jamaica appear as variable as those witnessed by myself in the East, and many persons died from an apparent shock to the system, and from which they could never by any remedial agent be got to rally, and rapidly sunk into collapse. J. B. T.

THE SYDENHAM SOCIETY.

To the Editor of THE LANCET.

SIR,—As I believe no reporter was present at the annual meeting of the Sydenham Society, held at their rooms in Frith-street, on Thursday night last, and as I consider that an outline of the proceedings would interest your readers and be beneficial to the Society, which requires a little extra light to be thrown upon the deeds of its Council, I have drawn up a brief report of the sayings and doings of the gentlemen assembled, which I believe will be found substantially correct.

The company consisted of some seventeen or eighteen gentlemen; five of them, inclusive of myself, appeared to be mere members, the others belonged to the Council. The five were kept waiting for a short time in the meeting room, during which a very lively rattle of tea-things was heard in the adjoining room, and presently the Council entered, chatting pleasantly and agreeably with each other. Mr. Benjamin Phillips was voted to the chair, and the business commenced by the secretary reading the Report, in which the Council gave themselves an excellent character for their conduct during the past year: he was followed by the treasurer, who read an abstract of the financial condition of the Society, by which it appeared that the Society had some two thousand members; that he had a balance in his hands of £700, and sundry other figures were mentioned, but as I desire to be exact, I forbear from stating them. As soon as he had finished, a member of the Council I believe—at all events he came out of the little room with the others—rose and moved a resolution that the Report should be adopted, speaking at the same time with some animation in praise of the body to which, I suppose, he belonged; another councilman seconded the

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resolution, and the business was all going on very pleasantly, when I rose and asked the chairman's permission to put a few questions to the Council, and proceeded to ask why the meeting had not been convened by circular. This was evidently an unexpected query, as no one seemed inclined to reply. After a considerable pause, however, the secretary rose and stated that it was owing to the expense; to which I replied by saying that I had gone into that question and found that it would not cost more than £15, and if the Society was too poor to meet this, I felt certain that the members would cheerfully contribute an additional twopence to their annual subscription, by which it could be easily met; I said, moreover, that that was not the true reason why they did not convene their meeting by circular, but that it was because they were afraid to meet their constituents, and as for this meeting being an annual gathering of the members, it was a hole-and-corner meeting, planned and arranged in such a way that none but members of the Council and their particular friends should be present. The secretary here interrupting me, said it had been advertized, and was not that sufficient? I replied by pointing to the members present, and asked him whether the small number was not confirmatory of my opinion, that not one in a dozen perhaps of the members were cognizant of this meeting, or had seen either of their advertisements. I then proceeded to ask what were the duties of the secretary, that he should be paid £157 10*s.* annually, especially as the secretaries of the other medical societies in London gave their services gratuitously. A gentleman here jumped up and was proceeding to give an idea of the secretary's services, when Mr. Quain, I believe, suggested that I should be heard throughout, and then answered afterwards, assuming an air which distinctly proved how easily he thought I should be demolished by the meeting. I then asked why, in the accounts, the sum of £181 17*s.* 2*d.* was included under the head of rent, &c., and why were not the items put separately; and finally, in what way they had expended the large sum of £495 17*s.* 6*d.* in editorial expenses, and to whom it had been paid. Before resuming my seat, I entered my protest against some of the useless publications that had issued from the press. I then commented on the list of members chosen for the Council, and remarked that in the proposed list I could not detect the name of one general practitioner properly so called, and seeing that nineteen-twentieths of the Society consisted of surgeons in general practice, I could not understand the spirit of exclusiveness upon any other grounds than that they were afraid of admitting any fresh blood into their corporation, hence their election and re-election of gentlemen on the Council. I concluded my observations by saying that I was not deterred by finding myself in a room where the feeling was evidently against me, as I was determined to continue my opposition until the Council fully reflected the opinions of the members.

I was followed by the Secretary, who stated that, as regarded himself, he should leave some one else to speak for him, but in reference to the other question, he had to state it was usual in all accounts to lump certain items together: as regarded the last question, the average expense of editing the Society's books was £100 per volume; that it had always been the desire of the Council to get general practitioners amongst them; that it was wrong to state that there were none on the list, as there were five of that class in the twenty-four proposed. He was followed by the Treasurer, who read from his book the following figures, showing who received the £497. Dr. Sieveking, 2nd vol. of Rokitansky, £94 10*s.*; Dr. Adams' Hippocrates, £226 5*s.*; Dr. Latham's Sydenham, £100; Dr. Churchill's Diseases of Women, £74 12*s.* 6*d.*; making £495 7*s.* 6*d.*

Dr. Copland then rose to express his opinion of the valuable services of the secretary; he was capable of giving an opinion, as he had been in the hands of the printers for thirty years; the secretary had the trouble of revising the works before they went to press, of answering letters; indeed, his labours were multifarious and onerous; that the questions that had been put were those that had appeared in the medical journals anonymously; that the society was not established for the uneducated, but for the learned members of the profession; that he had long since wished to resign his seat on the Council, but had been requested not to do so by them.

Other gentlemen, members of the Council, followed in the same strain, praising their body, and alluding to the valuable services of the secretary; and the resolution being put to the meeting, was declared to be carried.

An attempt was made by myself to reply to the remarks of the various speakers, but the chairman ruled that I should not be again heard.

A ballot was then made for the Council, but the names I did not obtain.

Other resolutions followed, which were similarly spoken to. On a vote of confidence in the secretary being proposed, I rose and seconded it, first, because I was anxious to remove from his mind any impression of personal hostility; secondly, because I was desirous of expressing my astonishment at his valuable services; and thirdly, as I wished to repudiate any connexion with the anonymous communications to the medical journals reflecting on the Council of the Society.

With a vote of thanks to the chair, the meeting separated.

Such, Sir, is the mode in which the annual meetings of the Sydenham Society are conducted. Many of my brother members will perhaps be astonished to hear that a physician to a large public hospital, a lecturer, a medical officer to two insurance offices, besides holding other appointments, has to work so hard as secretary. How he can find the time is a marvel. But it is a manifest injustice to him, seeing that large sums are paid for editing works, that he should be called upon to see them through the press. He has also a clerk under him—what does he do? —What right has the society to have £700 in hand?

I forbear from making any further comment on this meeting, leaving my fellow members to draw their conclusions from what I have communicated.

I beg to remain, yours respectfully,

J. Rogers.

THE KEY-TSE-SING: OR CHINESE EMMENAGOGUE.

To the Editor of The Lancet.

Sir,—My communication inserted in a recent number of your valuable journal has brought me (in compliance to my request) a number of answers, most of them favourable, of the emmenagogue, from which I select one, and request the favour of its insertion at the earliest opportunity.

I have the honour to remain,
Your most obedient servant,
Edward Williams, M.D.

Upper Clifton-street, Finsbury, May 12, 1851.

Winterbourn, May 10th, 1851.

Dear Sir,—In answer to your request conveyed to me through the pages of The Lancet, I beg to inform

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you, that in several cases of suppressed menstruation, I have found the Key-tse-sing productive of all the advantages you claim for it, and I think it will become a valuable addendum to the list of emmenagogues. One case in particular, which I herewith forward you, is well illustrative of its specific powers.

Believe me, your obliged servant,
T. H. JONES, M.R.C.S.

To Dr. Williams.

Miss Jane S., the daughter of a respectable yeoman, aged twenty, has never menstruated, and has, from the age of fifteen, been subject to all the usual symptoms of irregular appetite, vicarious discharges, and violent hemiplagia, with severe attacks of despondency and suicidal tendency; she had been under my care at various times, with only temporary relief, and had consulted several of the most eminent of the London faculty with no beneficial result. About two years since, she had several epileptoid fits, with severe opisthotonos, which have returned at shorter intervals, and with increased severity, until February last, when I exhibited the Key-tse-sing in full doses for upwards of ten days, in the manner you directed me; the result was, that menstruation appeared freely, all the general symptoms have disappeared, and the the epileptic attacks have entirely ceased.

I have, according to your wish, administered small doses of the emmenagogue before each menstrual period, and shall continue to do so as a measure of assistance for a few months, and will again communicate the result to you.

SMALL-POX AND VACCINATION.

To the Editor of THE LANCET.

SIR,—The debate on small-pox and vaccination at the Royal Medical and Chirurgical Society must for some time to come keep the minds of medical men fixed steadily on those important subjects, and may perhaps crowd your pages with opinions as to the dicta of the various speakers. Should this occur, so as to elicit further explanations from the distinguished authorities who took part in the discussion, you will, I doubt not, think your space well occupied.

The cases of Dr. Webster are those of three brothers, all vaccinated, who nevertheless contracted variola, one of them once, another twice, and the third three times, the last attack being fatal. Dr. Stewart's case is called confluent small-pox after a third vaccination. It seems doubtful, however, from the writer's own description, whether the vesicles (query *pustules*) were confluent at all—whether, in fact, they were not distinct, though very numerous, and closely packed. One may fairly object, too, to reckon three vaccinations, where it appears that once the operation totally failed, and on another of the three occasions it produced a vesicle obviously irregular. This was evidently a very dangerous case, and little calculated "to show the influence of vaccination, in opposition to the case of Dr. Webster," which Dr. Stewart alleges to have been his object in bringing his paper before the Society.

Can either of the learned authors adduce an instance of severe small-pox after two successful vaccinations—after the true and regular vaccine vesicle has been twice communicated? Dr. Mayo's remark as to small-pox which simulated measles may be applied to the eruption produced by second vaccinations, and should show us the necessity of distinguishing between only an apparent, and not a real, repetition of the disease.

Dr. Gregory's opinions are of course entitled to a high degree of respect, but some of them enunciated on this occasion are hard to admit or comprehend. He views the fact of revaccination in Dr. Stewart's case having been practised, and followed by local inflammation, as showing convincingly the little value of re-vaccination. That the operation, when either without result, or with an abnormal one, is of little value, nobody will dispute,—of little value, that is, except as denoting the continued influence of the previous vaccination. But I would again ask—Is a second vaccination, when the vesicle produced is perfectly regular, to be regarded as valueless? I think not. In an experience of three-and-twenty years, not scanty, nor altogether in private practice, I have never seen small-pox after two successful vaccinations, though I have repeatedly, like others, I presume, re-produced a true vaccinia, and met with cases of small-pox after a single vaccination.

The statement that small-pox after inoculation, occurring above the age of fifty, and after vaccination up to the fifteenth year, is very rare indeed, the profession, I think, would be glad to see based on some numerical data, such as no one is more likely than Dr. Gregory to have at command. Two of the very worst cases of variola which ever fell under my care were those of a man of fifty, deeply pitted and scarred with small-pox, contracted twelve years previously, and of a child, aged four years only, whom I had myself vaccinated in infancy, with all the usual marks of success. In the elder patient the greater part of the cuticle was undermined by a continuous sheet of matter; the younger one bled freely from nearly all the mucous membranes, and from a great part of the softest portions of the skin; in both cases, occurring, too, as they did, during a local outbreak of small-pox, there were still a sufficient number of the characteristic pustules to identify the nature of the disease.

Speaking of the relation between small-pox and chicken-pox, Dr. Gregory states that we never see them go on together in the same person. This would seem, however, to have occurred in the case which had just before been mentioned by Dr. Marshall Hall; and I had a case of the kind only a fortnight past, in a child six years old, and vaccinated in infancy, where the pimples of horn-pock, the vesicles of glass-pock, and the umbilicated pustules of variola, were side by side; and I have seen it repeatedly.

The experiments of Cazenave do indeed make one regret that in our statute prohibiting vaccination there is no saving clause which would enable the qualified practitioner either to pursue such investigations, or to give at least the slender aid of inoculation in isolated places, where small-pox may have broken out in an unvaccinated family, and the Jennerian prophylactic is refused.

Before troubling you again on this subject, I will wait awhile, in hope of further enlightenment from other contributors to THE LANCET; and, hoping that until the profession has arrived at something more like unanimity as to the reliance to be placed on vaccination, the public may know nothing of our differences.

I remain, your most obedient servant,
F. A. B. BONEY.

New Inventions

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

An Improved Button-Lock for Fastening the Dress of the Insane.

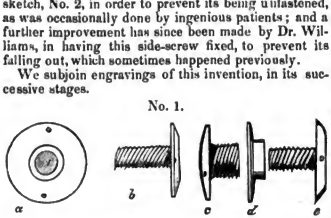
THE late Dr. Powel, Medical Superintendent of the Nottingham Lunatic Asylum, had, many years ago, a button-lock in use, as shown in sketch No. 1 annexed, and suggested its use to the Physician-Superintendent of the Gloucester Asylum, Dr. Williams, by whom it has

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been used ever since. Dr. Williams having taken every opportunity of making its advantages known, Dr. Cox, of the Lunatic Asylum at Fishponds, near Bristol, made an important addition—viz., a side-screw which was moveable, as shown in the accompanying sketch, No. 2, in order to prevent its being unfastened, as was occasionally done by ingenious patients; and a further improvement has since been made by Dr. Williams, in having this side-screw fixed, to prevent its falling out, which sometimes happened previously.

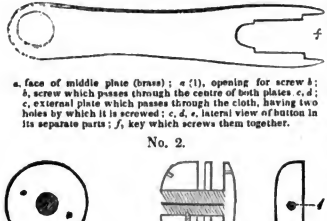
We subjoin engravings of this invention, in its successive stages.

No. 1.



a, face of middle plate (brass); a (1), opening for screw b; b, screw which passes through the centre of both plates c, d; c, external plate which passes through the cloth, having two holes by which it is screwed; c, d, e, lateral view of button in its separate parts; f, key which screws them together.

No. 2.



a, face of external plate (brass;) a (1), opening through which screw d (iron) passes; b and c, lateral view of external plate; c, middle plate, between which and b the cloth is fixed; d, iron screw, passing through the centre of both plates, and having two lateral grooves for the reception of the small side-screw (e 1;) e, lateral view of external plate, b, showing opening for small screw; b, c, d, lateral view of button complete, in its exact size; f, key for fastening screw d; g, small key for fastening screw e 1 into groove in key d.

An Aparatus for Administering Nourishment to Insane Persons who refuse Food. By JOHN FOSTER REEVE, Esq., M.R.C.S.E., Kensington.

MR. REEVE, who is the resident medical officer at Kensington House remarks:—

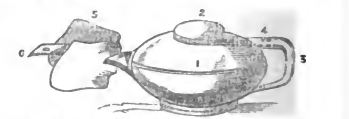
"One of the common difficulties embarrassing the medical practitioner in his treatment of the insane arises from the invincible determination to refuse sustenance, which distinguishes a certain class of lunatics. This peculiarity we cannot explain by reference to physical causes, especially when no evidence exists of disease or derangement of the internal organs. Such patients generally labour under particular delusions, or abstain from food with a suicidal intention; and although the majority of these unfortunate cases terminate fatally, notwithstanding our utmost care, they must not be abandoned as altogether hopeless; for if a certain amount of nourishment is administered daily, even under the most unfavourable circumstances, it may prolong life sufficiently to afford time for the delusion to alter its character, or pass away entirely, or in suicidal cases to overcome the propensity to self-destruction.

Amongst the various methods used for feeding insane patients, the stomach-pump has been very generally adopted, and judged effectual; but the operation of pumping is not always unattended with danger. Dr. Conolly altogether deprecates the system, and adduces, in his lectures, an instance where a man suffering from organic visceral disease died four days after the administration of food by the stomach-pump. Dr. Roupell and Mr. M'Whinnie describe the appearance of a lacerated stomach, where the mucous membrane was actually detached and torn into strips by the action of the stomach-pump. Sir Charles Bell observed, in a subject he was once dissecting, both lungs injected with broth; chalk mixture is also said to have been found impacted in the air cells of the lungs.

Under any circumstances the forcible injection of food or medicine into the stomach requires patience; it is always a troublesome task, and if confided to ignorant keepers is also a perilous one. Nearly half a century ago Dr. Haslam deplored 'the number of interesting females who had undergone the brutal operation of spouting in private receptacles for the insane, and who had been restored to their friends without a front tooth in either jaw.'

Frequent experience of the difficulties and hazard inseparable from the ordinary practice induced me to examine whether a simple contrivance might not be made efficient for the object required, and free from the usual risk incurred.

The accompanying sketch represents an instrument I designed for this purpose; and after numerous tests and applications in the most refractory cases I have proved it to be uniformly successful.



1. A strong metal vessel, shaped like a teapot. 2. A circular screw lid, perfectly air-tight. 3. Handle, hollow at the upper part, and communicating with the interior of the vessel. 4. Valve or perforation at the upper part of the handle, small enough to be covered by the thumb of the right hand. 5. Pewter mouth-piece, accurately made to fit the lower part of the face. 6. Strong flattened mouth tube, perforated at the sides, slightly curved, with a blunt, wedge-shaped apex.

It is used in the following manner: first fill the vessel with the required liquid, alternately milk, thickened with arrow-root, or eggs beaten up with new milk; strong beef-tea, with wine or porter. The patient is then to be placed on a bed, in the recumbent position; the head, supported on a pillow, must be firmly held by the assistants, as well as the trunk and extremities, in order to prevent the patient moving during the operation. The instrument is then to be taken in the right hand, and while the spout is applied to the lips, a small quantity of the contained fluid may be allowed to flow over them; at the same time the nostrils should be compressed with the thumb and fore-finger of the

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left hand. By this means it will be found the patient is soon compelled to open his mouth, and gasp for breath, when the spout of the instrument should be quickly insinuated between the teeth. The vessel can then be maintained in its situation, with the pewter mouth-piece applied firmly, or not, to the face, according to circumstances. The flow of the liquid into the mouth can be regulated at pleasure by the application of the thumb to the valve at the top of the handle; and it is easily known when the act of deglutition is going on by watching the ascent of the larynx."

Mr. Reeve has furnished us with the narration of several cases selected from a large number, at an extensive lunatic asylum in Surrey, and in which he states, the instrument has been tried fairly, and with advantageous results.

Medical Facts, News, Items, &c.

Dr. Kahn's Anatomical Museum.—We lately paid this exhibition a visit, and were much gratified with the collection of anatomical and surgical curiosities. Amongst the most interesting specimens that deserve approbation is the Anatomical Venus, which takes to pieces for the purpose of exposing the general anatomy and the relations of the various viscera. There are also preparations in leather and wax, which exhibit the entire structure of the human frame. The most important department of this museum is a series of one hundred and three microscopical figures, which show the progress of the ovum in the uterus from the time impregnation takes place till birth. We cannot speak too highly of this part of Dr. Kahn's collection. A room is set apart for members of the medical profession, in which the ravages of syphilis and gonorrhœa are very well shown. There are a few other specimens only fit for the medical eye, which would not be out of place in this room. Altogether it is a splendid scientific collection, and a great deal of general information is to be obtained by a visit.

Hospital that beats Bedlam.—*Mr. Punch* is very happy to say that the London Homœopathic Hospital is largely advertised under the patronage of that illustrious lady of science, the Duchess of Cambridge, the Lady Lindsay, Sir C. E. Eardly, Bart., and numerous other philosophers of both sexes, including a gentleman named Downey. *Punch* cannot too earnestly recommend this valuable institution to public patronage. When a fellow-being is seized with inflammation of the lungs, or some other organ essential to life, and but for prompt medical assistance would perhaps expire in a few hours, leaving a wife possibly, and several children, to lament his loss, what an advantage it is to him to be enabled to obtain that certain and instantaneous relief which is afforded by the billionth part of a grain of medicine. It is a pity that the board of management of the London Homœopathic Hospital does not publish those numerous cases of fracture and dislocation which have been reduced by the administration of Homœopathic globules, as also the reproduction of various amputated limbs effected as certainly as any disease whatever by the same means. The board also might as well have acknowledged those edicts of the Colleges of Physicians and Surgeons, which require that the candidates for their respective diplomas shall have walked the homœopathic hospital; and moreover, *Mr. Punch* misses the respected name of the Earl of Aldborough to the list of subscribers to the institution. —*Punch.*

British Medical Fund.—A meeting of the medical gentlemen of Manchester and the neighbourhood was lately held at the Town Hall, King-street, for the purpose of hearing a statement from Mr. Hawtayne, from London, Secretary to the British Medical Fund, in reference to the objects of that Society. Dr. Lyon presided. After the meeting had been opened by some appropriate remarks from the Chairman, in reference to the usefulness of such an institution, and the necessity of offering some provision for medical men, the Secretary was called on to explain the objects and rules of the British Medical Fund. Amongst several gentlemen who addressed the meeting, Dr. Renaud questioned the propriety of retaining that portion of the plan relating to life assurance. Various questions, however, having been put to the secretary, and satisfactorily answered by that gentlemen, resolutions were passed approving of the Society, and strongly recommending it to the profession at large for encouragement and support, and suggesting that a committee should be formed in this neighbourhood for the purpose of forwarding the objects and interests of the undertaking. Resolutions of thanks having also been passed to the promoters and directors of the Society for their zealous exertions in its behalf; to the Secretary, for his satisfactory explanations; and, lastly, to Dr. Lyon, for his able and courteous conduct in the chair; the meeting separated. Similar meetings, we understand, are being held in other towns throughout the kingdom.

Foreign Climates.—Amongst the erroneous opinions still prevalent in this country respecting the so-called salubrity of foreign regions over that of England, the ideal superiority of the South of France occupies a prominent position in the minds of some individuals. This tendency to migrate southward is shown by the number of invalids who there pass the winter in expectation of finding an Elysium, redolent of comfort, health, and happiness. How far such notions ultimately become realized, may be illustrated, in addition to other evidence, by the subjoined observations recently written to a friend in London, by a lady resident at Pau the whole of last season, to which place she had come for the *benefit* of her health.

Extract of a Letter from Pau.—"The air here is so relaxing and enervating, that one feels constant heaviness and depression of spirits, together with headaches and languor. One is not fit for much mental exertion; and a clergyman told me he could only write one sermon per week; whereas, in Switzerland, he could compose two with great ease. Oh, what I would give for a 'blowy day!' Another most uncomfortable circumstance is the difficulty we have in getting any medical prescription made up, and we are obliged to send to England to have ours properly mixed and accurately composed."

The above report is by no means encouraging, nevertheless many persons, like a flock of sheep jumping over a fence into a quagmire, often follow each other without inquiring why or wherefore, but merely from the blind confidence they have in their leader. Alas, will ignorance never be dispelled?

Dr. Marshall Hall before the Academy of Sciences of Paris.—We perceive by the report of the meeting of the 28th of April, that Dr. Marshall Hall has presented to the Academy of Sciences of Paris, a paper on his late experiments upon the three nervous systems, the cerebral, spinal, and ganglionic.

Mr. Wharton Jones having retired from the chair of physiology at the Charing-Cross Hospital, the pupils of the school have determined to present him with a testimonial, in evidence of their gratitude and respect to him as a teacher.

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THE FELLOWSHIPS.—The following are correct copies of the questions submitted to the candidates who presented themselves for examination for this distinction, on Monday, the 7th instant:—

ANATOMY AND PHYSIOLOGY.

1. Describe the structure of the wrist-joint. State what tendons, vessels, and nerves cross the joint on the palmar aspect; describe their position and relative situations.

2. Describe the duodenum, specifying its situation, course, and relations; its component structures and the sources of its blood-vessels and nerves.

3. Describe the course and relative situation of the subclavian and axillary arteries on the right side; mention the branches given off by them; state by what parts the subclavian, external to the scalenus, is covered.

4. Enumerate the blood-vessels and nerves proceeding to the lower extremity, and describe their relative situations and connexions at their exit from the pelvis.

5. Describe the vessels and nerves of the orbit, the sources whence they are derived, the apertures through which they enter the orbit, and their distribution.

6. Describe the position and relative situation of the viscera contained in the female pelvis, the peritoneal reflections and ligaments by which they are supported.

PATHOLOGY AND SURGERY.

1. Give the diagnosis of tumours of the female breast dependent on chronic inflammation, chronic mammary tumour, and schirrus.

2. Explain the leading rules of practice in the treatment of traumatic gangrene, and gangrena senilis.

3. What are the consequences to be apprehended when detention of urine dependent on stricture in the urethra, is not relieved? Describe the treatment suited to its various stages, whether by the use of instruments or other means.

4. Describe the circumstances under which the application of the trephine may be required after an injury to the skull by violence.

5. What are the dangers which attend incised wounds of the throat? Describe the treatment of these wounds.

6. When the posterior tibial artery, where covered by the muscles of the calf, has been recently wounded, what treatment would you adopt? And if there were secondary hæmorrhage and the parts in a diseased state, what practice would you follow?

MUNIFICENT BEQUESTS.—Dr. Jecker, of Swiss extraction, and who had accumulated a large fortune at Mexico, by the practice of medicine, died lately in Paris, in which capital he had resided since 1845. By his will, the Museum and National Library of Paris may choose among his books and pictures whatever they do not already possess. The bequests amount to £28,000; among these may be mentioned £8,000 to the Academy of Sciences, for the foundation of the prize to the author of the best paper on organic chemistry, £4,000 to the Paris hospitals, £4,000 to the hospital of Porentruy (Switzerland), the testator's native place. The residue of the diseased's property (more than £80,000) goes to his family.

Dr. BONGON, physician to the Duke of Bordeaux, and who remained faithful to the Bourbon family ever since 1830, has just died at Venice. He had rendered himself conspicuous by an act of great devotedness when the Duke of Berry was struck by an assassin.

THE SALE OF POISONS IN PARIS.—Two pharmacien's assistants in the French capital, Messrs. Brown and Walshe, employed in the establishment of Paris, Pommier, and Co., were lately fined respectively £1 13s., and £16, for having sold to a Miss Ogle, the first, one drachm and a half, and the second, one ounce and one drachm of Battley's solution. Miss Ogle wilfully poisoned herself with the preparation, and the proprietors of the establishment were held responsible for the payment of the fines. Would it not be wholesome if a few home-thrusts of this kind were dealt in this country?

ADULTERATION OF FOOD IN PARIS.—The fraudulent dealers are at the present time being treated with proper severity in Paris; the "préfet de police" has had nearly thirty butchers, grocers, and innkeepers, brought before the magistrates, and fined for selling unwholesome articles of food.

The late protracted "Concours" for the chair of Systematic Surgery at the Faculty of Medicine of Paris, has just ended by the appointment of M. Nélaton as Professor of Surgery. The competitors were Messrs. Robert, Michon, Nélaton, Bouisson (of Montpellier,) Richet, Gosselin, Giraldès, Jarjavay, Voilemier, Morel Lavallée, Chassaignac and Sanson. It is to be noticed that a great many of these gentlemen compete with no expectation of being appointed, but merely to take rank as to subsequent "Concours." The chair of the Practice of Physic, vacant by M. Piorry's appointment to the professorship of Clinical Medicine, is at the present time being competed for.

MEDICAL STATISTICS.—Dr. Casper, the indefatigable statistician, has had the idea of drawing up tables of vital statistics, bearing upon the medical profession. These tables are of great extent, and contain very interesting details. We must confine ourselves to the following facts. The number of Prussian practitioners is about 3,452; their age varies in the following ratio: there are 1,873 from 24 to 36 years old; 737 from 37 to 46; 561 from 47 to 56; 190 from 57 to 66; 87 from 67 to 76; and 4 beyond 77. It will thus be seen that fully one-third are not 30 years old, and that hardly one-sixth reach 60.

HOMŒOPATHIC FEATS.—We learn from the *Medical Gazette* of Madrid, that an unfortunate patient, affected with constitutional syphilis, died lately, after taking globules for a whole year, worn out by the most distressing syphilitic cachexia. This man was so blindly attached to the homœopathic deceit, that he would not hear of any other kind of treatment than that which led him to his grave.

CAUSES OF THE PRESENT UNSEASONABLY LOW TEMPERATURE.—M. Petit, of the observatory of Toulouse, thinks that the cold weather which prevails at the present time over a great portion of Europe, is caused by an innumerable quantity of planetary corpuscules, now interposed between our globe and the sun. He calculates that the earth will have escaped the influence of this meteoric nebulosity toward the 15th of May, and supposes that the passage of the earth through this mass of asteroids will be marked by the fall of aerolites. The calculations as to the advent of the warm weather have not been verified, at least as far as this country is concerned.

LONGEVITY.—A Pole, who had for a long time been in the French service, lately died at Paris at the advanced age of 127 years.

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THE LANCET.

A Journal of Medical, Surgical, and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

VOL. II. NEW-YORK, AUGUST, 1851. No. 2.

Abstract of the Introductory Lecture

TO THE COURSE OF

MILITARY SURGERY.

Delivered in the University of Edinburgh, May 1, 1851.

BY SIR GEORGE BALLINGALL.

THE professor, after stating that five-and-forty years have now elapsed since he entered the army as an hospital mate, and that almost thirty years have come and gone since the duties of the chair first devolved upon him, expressed his regret that an indifferent state of health had compelled him to transfer his lectures from the winter to the summer session, and this chiefly on account of the diminished attendance of army and navy surgeons which must be expected during the summer months. With reference to the valuable information obtained from many of these gentlemen, which he has always been prompt and proud to acknowledge, he proceeded as follows :—

"The advantages accruing to me from a numerous attendance of this description of pupils, have, in some measure, been made up, for the present, by the enjoyment of several accidental and much-valued sources of information during my recent absence. Since I closed my last course of lectures, I have been collecting materials for the improvement of a paper on hospitals, originally written for the 'Cyclopædia of Practical Surgery,' and which I have been urged to publish in a separate form. With this view, I have had the pleasure of visiting many of the civil hospitals of England, particularly those of Manchester and Liverpool, and the numerous hospitals in Dublin, civil and military. In that city I had the gratification of meeting a numerous medical staff, and passing some days in the society of my coadjutor, Mr. Tufnell, who has for some years delivered a course of lectures on Military Surgery in the Irish metropolis. Of this gentleman's introductory lecture you will see honourable mention made in recent medical journals. On the occasion of its delivery at the City of Dublin Hospital, he was honoured with the attendance of the Duke of Cambridge, the Commander of the Garrison, and his staff, supported also by Sir James Pitcairn, an old and experienced officer who served in the Egyptian campaign, and by the host of medical officers attached to the large army in Ireland. Mr. Tufnell is placed in a position where his energy, intelligence, and talent, have already commanded distinguished success, although the Government has not yet seen fit to extend to him the advantage which is enjoyed by the professor of military surgery in this University as a nominee of the Crown, nor to give him the stimulus of a moderate endowment, to which he is so thoroughly well entitled.

"Reverting to my own advantages, although not resident at any great school of medicine, I passed several months of the bygone winter amidst a group of old friends, military and medical, at Cheltenham, where I was in daily communication with old and experienced army surgeons. Amongst these was Dr. Allardyce, a gentleman with whose name I have been familiar for forty years, who has served in the Peninsula, in India, and in Persia, and who dates amongst the first of his fields the battle of Assayè, where the Duke of Wellington laid the foundation of his fame. There also was Dr. Arthur, an experienced and esteemed medical officer, who has served in South America and in the West Indies, and who, as a regimental surgeon, followed the fortunes of the Connaught Rangers in sunshine and in storm, through the earlier years of the Peninsular war. There, too, I met with Dr. Franklin, whose services extend to nearly forty years in the Peninsula, in America, and in the West Indies, and who has recently returned from India, where he held the important and responsible position of Inspector of Hospitals to the Queen's troops. He has come home enriched with all the recent experience of the wars in the Punjaub, a participator in the dear-bought victory of Chillianwallah and the final triumph of Goojerat. With these gentlemen, and many others, I have had much interesting and valuable communication, of which I shall be able to avail myself in the progress of the course.

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"Versed as they are in the usages, wants, and vicissitudes of the service, it is always pleasant and profitable to enter with such men into the details of my department; but in the course of my recent sojournings in different parts of England and Wales, I still find too much room to regret the limited, and often erroneous, opinions which prevail both *in* and *out* of the profession, as to the aim and objects of a course of military surgery. A very remarkable instance of this occurred to me lately. Having occasion to introduce myself to a very learned, eloquent, and popular clergyman of the Church of England, as the professor of military surgery in this university, he seemed startled with a designation to him altogether new, and thought, like many others, that I could have nothing to descant upon but gunshot wounds, broken heads, and shattered limbs; but a moment's explanation served to show him how much more important to the troops is the preservation of their health than the repair of their injuries—the prophylaxis of disease than the treatment of accidents. He saw in an instant what an extensive field lies before me; and it is with a view to show more distinctly the nature of this field, and to impress you with correct ideas upon the subject, that I now proceed to give, as I have hitherto done, a short sketch of the history of military surgery, and some notice of those who have been most prominent in the cultivation of this department of medicine."

The Professor here adverted to some very interesting notices of the medical staff of the Roman army, recently laid before the Antiquarian Society by his learned colleague, Dr. Simson, and of which he promised his pupils a further account when he came to treat of military hospitals and the medical equipment of armies. In concluding a brief notice of Baron Larrey, he gave the following account of a remarkable passage in the life of that great model of a military surgeon:—

"To the interesting brochure which I now hold in my hand, containing a detail of the proceedings at the inauguration of Baron Larrey's statue, at the Val de Grâce, in Paris, and which has, within these few days, been sent to me by his son, I am indebted for some details of an event to which I have frequently had occasion to refer; an event which, while it shows the energy of his character, his fertility in resource, and his disregard of everything but the interests of his sick, shows also the perfect reliance which he had on the Emperor, as the Emperor had on him. The anecdote is, indeed, equally creditable to both parties. After the battle of Essling, being in want of rations for the nourishment of the wounded, Larrey ordered the spare horses to be killed, commencing with his own, and *bouilli* to be prepared by stewing them in the cuirasses of the soldiers. The generals, deprived of their favourite horses, '*chevaux de luxe*,' as they are termed, were furious at this outrage of Larrey, and went to complain to Napoleon. The Emperor sent for him, and assuming a severe aspect, interrogated him in the presence of the Etat-Major. 'What!' said he, 'is it possible that you have, of your own authority, dared to dispose of the horses of the officers, and thus to make *bouilli* for your wounded?' 'Yes,' answered Larrey. 'Eh, bien,' replied the Emperor, 'I nominate you a Baron of the Empire,' (Je vous nomme Baron de l'Empire.")

After noticing the names and writings of the army surgeons of Great Britain, from Colnet and Morstede, who served in the time of Henry V., to those of the present day, the Professor observed,—"I cannot, gentlemen, close these remarks, without adverting shortly to two events of interest and importance to the medical department of the army, which have taken place since I last had the pleasure of meeting my class here—the retirement of the late Director-General, and the extension of the Order of the Bath to the medical officers of both departments of the public service.

"Sir James M'Grigor, lately the venerable chief of the medical staff, has retired, full of years and of honour, after a period of fifty-eight years devoted to the public service, in almost every quarter of the world. At the commencement of the present century his successful conduct of the medical affairs of that army which proceeded from India, under the gallant Sir David Baird, to meet the French on the plains of Egypt, first brought him to public notice as an author and an efficient medical officer. Soon after this I had myself an opportunity of witnessing, on a small scale, (while he superintended the Portsmouth district,) an instance of that promptitude, energy, and decision, which subsequently conducted him to the head of the medical department. Having proceeded with my regiment to embark for India, (the fate of which was then thought to be twittering in the balance, in consequence of the mutiny at Vellore,) we took possession of the barracks at Kilsea, which had been previously occupied by a regiment overrun and disabled by ophthalmia. Some severe cases having appeared amongst our men in the Royals, the regiment, at the suggestion of Dr. M'Grigor, was paraded three times a day, for the inspection of the surgeons, when every man who had the smallest appearance of disease in his eyes was hurried off to the hospital, and there subjected to instantaneous treatment,—I shall not now say how appropriate, but it certainly was not wanting in activity; and the result was, that we were enabled to embark and proceed to our destination, to the great relief and satisfaction of the authorities.

"These, however, were comparatively early events in the career of the future Director-General. The Walcheren expedition was all before him, where the medical emergencies of the service were so imperfectly met by the medical board of that day, and where the talent he had previously displayed in Egypt was again put in requisition. His subsequent success in conducting the medical duties of the army under the Duke of Wellington, during some of the most stirring events of the Peninsular campaigns, will be best understood and appreciated by a persual of his valuable paper 'On the Health of the Peninsular Army,' published in the *Medical and Chirurgical*

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Transactions of London—a paper to which I shall have occasion to refer again and again in the progress of the course, and which I cannot too earnestly recommend to your careful perusal. It will, I think, induce you to regret with me, that more is not done to preserve for yourselves and the future generation of army and navy surgeons the unwritten, the unpublished experience of such men as Sir James M'Grigor and his cotemporaries. This I have ever looked upon as a principal part of the duties of this chair, and have omitted no opportunity of putting myself in communication with experienced medical officers, whether at home or abroad. As regards our own service, the class of men to whom I allude is fast disappearing from amongst us, whether by the inevitable inroads of death, or the equally inevitable retirement forced upon them by the infirmities of age. It is, I rejoice to think, the latter, and not the former, which has deprived the service of the elevated rank, the matured judgment, and extended experience, with which Sir James M'Grigor has so long presided over the medical department of the army.

"The other event to which I have referred constitutes also an era in the history of the medical department of the army and navy,—the opening up of the Order of the Bath, in all its grades, to the officers of these departments. My views of the bearings of this measure on the interests of the public service will, perhaps, be best understood by the following extracts from a letter which I addressed to Sir De Lacy Evans while the question was pending:—

"'It has long been my opinion that the exclusion of the medical officers of the army and navy from such honours is not only the cause of vexation and heart-burning to individuals, but of grave detriment to the public service. The encouragement given to men to look almost exclusively, for the attainment of professional honour and distinction, to eminence in civil life, is ill calculated to induce young men of talent to enter the army, or to retain them in it. One of the most important results which I should expect from the distribution of these honours would be, to encourage the medical officers of the public service in the faithful discharge of those varied duties which they owe to the British soldier and seaman, who are doubly exposed to the perils of war, from the hazard of battle and the influence of noxious climes. These rewards would tend to concentrate the attention of army and navy surgeons upon pursuits peculiarly their own, upon those departments of study and those fields of practice in which they, and they only, can possibly excel. The man who enters the public service with the education of a surgeon and the spirit of a soldier should be attached to it by the prospect of those military honours which you, a soldier by profession, conversant with the true interests of the service, are so generously prepared to share with him.'

"The distinguished officer to whom these remarks were addressed, and another gallant officer, Sir Howard Douglas, had, for years, advocated in their places in Parliament the admission of the medical officers to the military honours of the state; and the former of these gallant soldiers did not cease, upon every proper occasion, to question the minister upon this subject, with an energy and perseverance which ultimately triumphed. He was well supported by the public press, more especially by THE LANCET, the *Times*, and the *Morning Chronicle*, in which appeared one of the most eloquent and convincing of all the numerous papers which were written upon the subject To the very flattering resolutions passed by numerous medical associations in favour of this measure, and to the liberal conduct of many distinguished men in the civil department of the profession, the army and navy surgeons are deeply indebted But it is to the strenuous exertions of a professional friend of my own, Mr. Martin, a retired surgeon of the Bengal army, that they are, above all others, indebted for the decoration which they are now entitled to wear. He it was who broke down the barrier which had so long excluded the medical officers from a participation in the honours of their military comrades, and silenced for ever the abettors of this invidious distinction. This gentleman is the author of the 'Summary of the Claims of Medical Officers,' which appeared in the LANCET, and first brought to light numerous interesting anecdotes of medical officers modestly lying hid in the bosoms of their friends, and which proved to the public in a manner irresistibly convincing, that while surgeons are exposed even more than their military brethren to the formidable dangers incident to a deadly climate, a sickly garrison, or a crowded hospital, they have had a large share in the perilous work of the trenches, and in the more obvious dangers of the battle-field.

"Some few there may be who are inclined to underrate the importance of the Order of the Bath as a stimulus to the surgeons of the public service, and an honour unsuited to men of science. But, to use a professional illustration, such honours have always appeared to me like the enviable talent of a dexterous operator, which, although sometimes spoken of as an inferior attainment, is seldom undervalued by those who possess it, and is often greatly admired by those who do not. Bonaparte, who knew human nature well, and who termed such distinctions 'the cheap defence of nations,' did not find that they were thrown away upon a Desgenettes and a Larrey; nor, judging from the tenour of their writings, would they have been lightly esteemed by our own Jackson and Trotter—two of the most learned, scientific, zealous, and efficient officers who ever adorned the medical department of the British service. The man who was complimented by Sir John Moore, as possessing so entirely a soldier's spirit, was not likely to have undervalued the badge of a soldier's merit. The man who roused the surgeons of the fleet to present a medal to the illustrious Jenner, was not likely to have despised a similar compliment to himself.

"If there is anything, gentlemen, to regret in

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the recent distribution of the honour of which I have said so much, it is that it has not been carried sufficiently far. It has not, in any instance, been given unworthily. But I can point to one of my personal friends, an inspector of hospitals, with thirteen clasps to his medal, to another with twelve, to another with ten, and to others with numbers little inferior to this; and so long as these gentlemen remain unrewarded by the Order of the Bath, I cannot think that justice has been fully done. The distribution of this honour has, I know, been regulated in conformity to a practice which has hitherto restricted the Companionship of the Bath to field officers in the army, or to medical officers of a corresponding rank—to those, in short, who have held a high position on the staff, or who have been at the head of the department on some important occasion; so that, whatever service a young man may have done as a regimental surgeon or assistant-surgeon, he is not considered eligible to it. Were this regulation applied only to those who, like myself, retired from the service soon after the termination of the war, there would be little reason to complain; but I hold it to be very injuriously applied to those who have remained in the army to attain the rank of inspectors or deputy-inspectors of hospitals, and to do the country good service with this advanced rank in distant and unhealthy climes. Some of these veterans of the Peninsular war are, even now, serving as regimental surgeons, in a green old age—others have been compelled to retire, at an advanced period of life, their health impaired, and their constitutions broken down, under the vicissitudes of foreign service. From such men any compliment which could tend to soothe their declining years should not be withheld. It seems hard that the infirmities of advanced life should be embittered by the neglect of youthful merit. Regulations, it may well be said, are sometimes more honoured in the breach than the observance. No rule was discredited in the exercise of authority which gave to my gallant friend and former shipmate, the late Sir Robert Sale, the colonelcy of a regiment before he had attained the rank of a general officer. No regulation was dishonoured in the gracious act of the sovereign which conferred on the youthful hero of Moultan, a brevet majority, and the Order of the Bath, while yet a subaltern in the Bengal army.

"I have indeed been told that the possession of the war medal with numerous clasps does not imply that kind of merit which ought to lead to the more exalted honours of the state; but upon this point I must avow an opinion somewhat different. A surgeon cannot have been present on *thirteen* of the occasions for which these clasps were granted, without having either done good service to his comrades, or shamefully disgraced himself; and where he has not done the latter, it is no great stretch of liberality to infer that he has done the former.

"Bear in mind, gentlemen, that the best army surgeons have always been those who have identified themselves most with the feelings and the fortunes of the soldier; and I rejoice to think that the medical man who participates in the soldier's toils, his dangers, and his triumphs, is no longer debarred from a participation in those honours which have ever been the object of a soldier's ambition."

Lectures
ON
SOME OF THE MORE IMPORTANT POINTS IN SURGERY.

(*Delivered before the Medical Society of London.*)

By G. J. GUTHRIE, Esq., F.R.S.,

Late President of the Royal College of Surgeons of England; Consulting Surgeon to the Westminster Hospital, etc.

(*Continued from July No., page 8.*)

The diameter of the urethra; the different portions of the urethra; Wilson's or Guthrie's muscle; anatomy of the prostate gland; uses of the prostate; the mucous membrane of the bladder, ureters, and urethra; researches of Quekett, Hancock, and Kölliker respecting the involuntary muscles of the urethra; the female urethra.

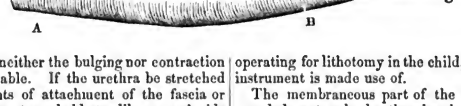
The diameter of the urethra is as uncertain as the length, varying in different individuals from three to five lines, or even from a quarter to nearly half an inch. The orifice is the smallest part, except in a few rare instances, when it is about a quarter of an inch within it and in sight. The orifice is also the least capable of extension, although every other part may be stretched considerably. A permanent contraction, therefore, in any part of the canal, can rarely be effectually cured by dilatation unless the orifice is enlarged, which can only be done by its being divided—a fact now well known to all persons of character and experience, but which from prudential reasons is not always distinctly stated in books. In a sound state of parts, the urethra continues of a size at least as large as that of the orifice, and will from its elasticity admit an instrument with ease which is larger; until it reaches the part where it begins to be surrounded by the bulb of the corpus spongiosum, and therefore called the bulbous portion of the urethra. This part of the urethra, although not very perceptibly larger in the natural state when examined after death, does admit of much more extension than any other portion when a cast is taken of the whole urethra by distending it with pressure by a fusible metal; The accompanying diagram shows this in a remarkable manner. Fig. 1 is a cast made by Mr. Quekett in situ, with some distention. *A* is the anterior part of the urethra gradually dilating into the bulbous portion, which terminates and is again contracted at *B*, in a more sudden and marked manner, being the part where the urethra is surrounded by the anterior layer of the deep perinæal fascia, formerly called the triangular ligament of Camper. When a urethra is removed with the parts around it from the body, and slit open on

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Fig. 1.



Fig. 2.



its upper part, neither the bulging nor contraction are very observable. If the urethra be stretched whilst the points of attachment of the fascia or triangular ligament are held steadily on each side the ridge, the fascia forms under it may be distinctly felt and seen. I object to the term triangular ligament as applicable to the part underneath the urethra, because it is found with some difficulty on dissecting the parts; and leaves on the mind of the student an unfounded impression of its nature, although the form, separations, and attachments of the fasciæ at this part constitute the most difficult part of knowledge to acquire, give the most trouble, and are the most important in the treatment of diseases of the urethra. It is at this spot at which the worst strictures exist, at which false passages are usually made, and which the dilatable state of the bulbous portion of the urethra in front of the resisting fascia greatly favours. The diagram shows this part well: at *C* it marks the entrance into the bladder, whilst it also shows that the distance from *B* to *C*, or the extent of the membraneous part of the urethra, and of the prostatic portion, is not near as much in the natural state of parts, when they are held compactly together, as when they are removed and stretched out for measurement. Fig. 2 (also made by Mr. Quekett) shows a similar portion of the urethra simply filled with the same metal, but without being distended. The development of the bulbous portion, or *gulph* as it was called by the ancient anatomists, is not so marked as in Fig. 1, and the length of the membraneous and prostatic portions is greater. The differences of length estimated by different surgeons for these parts may perhaps be thus accounted for.

The urethra obtains its full developement at and after the age of puberty, previously to which it is more uniform in its dimensions, being nearly free from the inequalities which have been noticed. It assumes at this time a somewhat different form as to its curvature, particularly at the posterior or prostatic part, which rises in the child much more perpendicularly into the pelvis than in the adult, and is comparatively longer, the bladder being situated higher, and more elevated towards the abdomen, requiring, as has been long well known, a greater turn for the end of the staff in operating for lithotomy in the child, when a curved instrument is made use of.

The membraneous part of the urethra is surrounded, not only by the sheath of *involuntary* muscular fibres just noticed, but by the *voluntary* muscle, first fully described in my lectures in 1830, which is a sphincter, closing when in action the urethra, and preventing the passage of urine from the bladder. The muscle may be sought for from within, which is perhaps the best way, by carefully dissecting off and turning aside the inner layer of the deep perinæal fascia with the levator ani muscle, of which it was supposed by Mr. Wilson to form a part, but which is a totally distinct muscle, having no connexion with it. The pubic artery runs in front of it, but internal to the external layer of fascia, the muscle and the artery both lying between its anterior and posterior layers, which posterior layer turns round the inner edge of the levator ani muscle, to invest the urethra and prostate. On the upper part there is a median line of tendon attached to the pubes by fascia, one half of which runs backwards with the muscle, to be inserted into the upper surface of the prostate; the other half passes forwards on the urethra, through the triangular ligament, to be inserted in front of it, near the union of the corpora cavernosa. On the under part there is a similar tendinous line, which is attached posteriorly to the fascia underneath the apex of the prostate, and forwards to the central tendinous point in the perinæum. The muscle on its upper surface is covered by fascia descending from the pubes. From the median tendinous line, in the upper part of the urethra, the fibres pass outwards on each side, converging, as they proceed, so as to form a leg of muscular fibres. On the under surface the same thing takes place; and a leg on each side being thus formed from the superior and inferior fibres running from above and below the urethra, they unite and pass outwardly, that is, transversely across the perinæum, to be inserted into the ischium, near or about its junction with the descending ramus of the pubis on each side.

I have noticed this part of anatomy more than I should otherwise have done, because I have seen in the latest publications on this point, that some mistakes are yet made. It is supposed that the

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late Mr. Wilson, my old teacher of anatomy and friend, and I, have each described a muscle, and that there are consequently two different muscles, which is an error. Mr. Wilson described the same muscle but imperfectly, from having always dissected the parts laterally—that is, by making a side view of them; and he concluded that it was a detached portion of the levator ani; but this is an error, one muscle being anterior, the other posterior to the internal layer of the deep fascia which is between them; but fasciæ in his day were not so much attended to as at present. There are not two muscles, but one muscle; and as it is as distinct in the female as in the male, it is evidently not for sexual purposes.

Mr. Quekett, on making recently a careful examination of this part, has found that some considerable portion of this muscle is continued on to the anterior part of the prostate, and is intimately blended with its tissue; the transverse striæ, characteristic of voluntary muscle, being very readily recognised in this position. A muscle, termed *levator prostatæ* by Santorini, and also by Ellis, has its origin at the posterior surface of the symphisis pubis, and is continued backwards, to be inserted into the upper portion of the fascia of the prostate; this muscle, however, when present, is distinct from that above described.

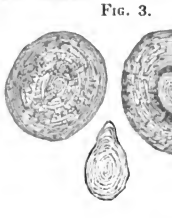
It is not generally known, even if it be generally taught, that a tendinous part of the accelerator urinæ muscle surrounds the urethra at the commencement of its bulbous portion; and there is sometimes here a slight narrowing of the canal, when compared with its anterior part, previously to the formation of the more dilatable portion or bulb; and at this part a stricture is often found to take place. This conformation would lead to the supposition that the accelerator urinæ is also a sphincter; and Mr. Hancock believes that it is certainly a depressor, opposed to the erectile forces of the general structure of the parts. The accelerator urinæ, and the compressed urethra I have described, have a singular resemblance to each other, which can, however, be only seen when they are carefully and fully dissected, which I apprehend is a performance not too frequently had recourse to, judging from the descriptions I occasionally hear of these parts.

The intimate structure of the *prostate* gland has been investigated by many anatomists even of modern times, such as Müller, Weber, Henle, Jones, and Adams; and again more lately, by Mr. Quekett and Mr. Hancock, under the microscope. Mr. Hancock finds that the bands of the prostate —noticed by Dr. Jones as resembling involuntary muscular fibres, are in reality composed of such fibres, proceeding from and continuous with those of the inner layer of the bladder, the nuclei being larger in proportion to the fibres in the young than in the old, from the prevalence of phosphatic deposit and fatty degeneration; and this defective state of muscular development may, Mr. Hancock thinks, in some degree, account for the incontinence of urine to which elderly persons are subjected. Mr. Quekett considers the secreting portion of this gland to consist of a series of minute follicles, aggregated together and communicating with an excretory duct; these are firmly enclosed by a dense fibrous capsule, derived from the vesical fascia, which is divisible into two layers, between which the prostatic plexus of veins runs. When a vertical section of the prostate is made, especially if the gland have been injected, the follicles may be seen in outline, and an opaque brownish fluid may be squeezed out of them; but if one of the duets be injected, their shape is more clearly shown; they are generally of a more or less oval figure, and in a healthy gland may be said to measure, on an average, $\frac{1}{70}$th of an inch in diameter. The interior of the follicles is lined with spheroidal or glandular epithelium, that of the ducts being a modification of the tesselated and columnar. In a well developed gland there are as many as fifteen or twenty ducts, all of which open into the urethra, in the neighbourhood of the *verumentanum*. The greater portion of the tissue filling up the spaces between the follicles is composed of the areolar kind, containing a large amount of involuntary muscular fibres, to which, according to Dr. C. H. Jones, the hypertrophied condition of the gland is due, rather than to the phosphatic deposit and fatty degeneration of Mr. Hancock.

In aged persons both the grandular structure and the intermediate tissues are frequently much enlarged; the follicles in persons of all ages, from childhood upwards, contain calculi composed principally of phosphate mixed with a small amount of carbonate of lime. They are of a yellow colour and their presence so constant that they would seem to be a part of the natural secretion of the gland. The deposition of the earthy material commences in the secreting cells of the gland, and the calculi increase in size both by the aggregation of fresh cells and by deposit in concentric laminæ. In the former case they mould themselves to the form of the follicles, and in the latter they exhibit a concentric arrangement. When dilute hydrochloric acid is added to them the earthy matter disappears, and a cast of the original calculus remains in animal matter.

A few of the minute calculi are shown in fig. 3, under magnifying power of $\frac{1}{350}$diameters; these specimens vary in size from the $\frac{1}{500}$th to the $\frac{1}{70}$th of an inch; they occur from this small size to large oval masses three inches in circumference; their most common diameter, however, is about the size of a grain of mustard.

Fig. 3.



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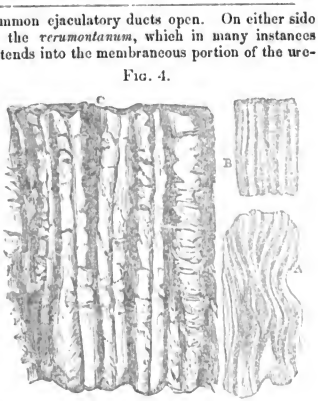
It is usually said, that the female has not a prostate, but merely an erectile tissue surrounding the neck of the bladder. If the word prostate be used with reference to its derivation, as standing before the vesiculæ seminales; certainly a woman has not a prostate, because she has no vesiculæ seminales; but she has the rudiments of a muscular substance, sometimes surrounding the commencement of her urethra, which is often as large as the prostate in a boy before the age of puberty, and resembles very nearly in external appearance the same part in the male. The ejaculatory ducts in the male, opening into the urethra, are of course wanting, and there do not appear to be any proper ducts of the part itself, so that this substance may be considered in the female to be entirely muscular, and destitute of the follicular structure, which gives the additional bulk to the male prostate. Cowper, who was well acquainted with this part in the female, calls it corpus globosum, and it performs in her, in all probability, the first office attributed to the prostate in man.

The prostate gland in the male has at least three offices—viz., 1, to stand before the orifice of the bladder to give support to it and the urethra which it surrounds, and a point more or less fixed, upon which it may act in expelling the urine; 2, to secrete a fluid peculiar to itself; and 3, to receive the ducts conveying secretions from other parts: which two latter uses cannot be attributed to it in the female, and the want of which may account for the difference of size in this part, in the two sexes.

The internal coat of the bladder, according to Mr. Quekett, consists of mucous membrane having an investment of epithelium, and a sub-mucous areolar tissue; it lines the interior of the bladder, and is continuous with that of the ureters and urethra; in the undistended state of the bladder it is thrown up into folds. The mucous membrane is largely supplied with vessels which form a more or less hexagonal net work, and are most numerous in that part near the cervix termed the trigone, and around the openings of the ureters; in this latter situation the net work is very close; between the meshes of some of the vessels, especially near the cervix, minute mucous follicles are situated. The epithelium of the bladder is of the squamous or tesselated variety, or rather a modification of that and the columnar; it is easily detached after death.

The *mucous membrane* of the urethra is continuous with that of the bladder, and throughout its course presents to the naked eye certain points worthy of observation in each of its divisions. The office of the *uvula* is said to be that of closing the orifice of the bladder in its undistended state. In front of this the mucous membrane is slightly rugous, the rugæ, as shown by *A*, fig. 4, passing on each side of an elevated triangular body, termed the *verumontanum*, or *caput gallinaginis*, which has in its centre an opening, termed *sinus pocularis*, leading into a cavity, described by Morgagni, Ackerman, Weber, Huschke, and others, as a rudimentary uterus, in the sides of which the two common ejaculatory ducts open. On either side of the *verumontanum*, which in many instances extends into the membraneous portion of the urethra, are the ducts of the prostate. Immediately in front of the membraneous portion, the mucous membrane becomes very rugous, the rugæ taking a longitudinal direction; these are continued on to about the centre of the spongy portion, where they disappear, the membrane here being smooth and glistening. In this part the orifices of many lacunæ are visible; one of these, situated at the upper portion of the mucous membrane, and sometimes within three-quarters of an inch of its termination in the glans, is termed *lacuna magna*; the anterior extremity of the spongy portion is more or less soft and villous, and at the external meatus is continuous with the true skin. When, however, the vessels of the mucous membrane of the urethra are injected, and its several parts are submitted to microscopic examination in succession, the following points of interest have been observed by Mr. Quekett.

Fig. 4.

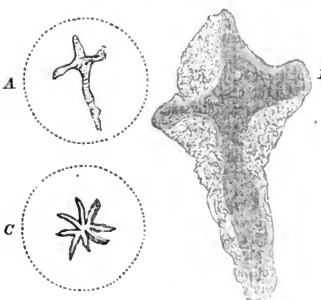


In the prostatic portion around the *verumontanum* the mucous membrane appears puckered up into folds, those of the cervix being continuous with those of the commencement of the membraneous portion; between these folds are situated the openings of the prostatic ducts; and around each duct, as well as around the *sinus pocularis*, the membrane is arranged in a series of minute concentric circles. The capillaries of these parts are very delicate, and in some places small papillæ occur. The mucous lining of the membraneous portion is rather smoother than that of the prostatic; but immediately on entering on the spongy portion it becomes rugous, the rugæ, as shown of their natural size by *B* in Fig. 4, or magnified nine diameters by *C*, taking a longitudinal direction; they are most strongly marked about an inch anterior to the bulb, where they are *nine* in number. When uninjected, they present a bluish tinge, and a fibrous structure like that of tendon. About midway between the bulb and the meatus the rugæ disappear, but the membrane is

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still glistening and fibrous. Within three inches of the glans the mucous membrane is softer; and in some specimens papillæ occur in rows widely separated, which become closer and closer as they approach the glans, in which part they are most abundant. In each papilla there is a looped capillary, which in most cases is slightly twisted upon itself. The rugæ are largely supplied with bloodvessels, the depressions or furrows being much more vascular than the projecting portions. If the urethra be divided transversely, in this part of its course, the projecting portions of the rugæ are nearly in close contact. Within two inches of the bulb, as shown by *A* in Fig. 5, in a preparation of Mr. Hancock's, the section of the mucous membrane will very much resemble a large leech-bite, there being generally about three folds; in this situation, as represented by *B*, numerous papillæ sometimes occur. Still nearer the bulb the projecting portions are as many as six, seven, or nine in number, and the section at this part

Fig. 5.



assumes a stellate form, as represented by *C* in Fig. 5. The basement membrane of the urethra is very thin, and in some parts can hardly be said to exist. The epithelium is of the tesselated variety; in the anterior part of the spongy portion nearer the bladder it is more or less spheroidal, being to all appearance situated upon a fibrous tissue. Immediately below the mucous membrane are the involuntary muscular fibres of Mr. Hancock, which, when seen in their natural condition, are rather smaller in size than those of the intestinal canal, and present a minutely granular appearance. When acted on by acetic acid, their elongated oval nuclei are plainly seen.

Since the delivery of the lecture, Mr. Guthrie has ascertained that the involuntary muscular fibres of the urethra and prostate, described by Messrs. Quekett and Hancock, had been previously noticed by Professor Kölliker, of Wurzburg. The labours of these gentlemen have been, however, totally distinct and unknown to each other, and they are alike entitled to the approbation of their fellow-anatomists. His account is as follows, in the Zeitschrift für Wissen, Zoologie, Band I. pp. 67–71:—

"The urethra and the parts connected with it present various developments of the organic or involuntary muscular fibres.

The prostate gland, and that part of the urethra which lies in it, are the most remarkable for their richness in muscular fibres, the glandular structure being present in a relatively small proportion, forming hardly more than one-third or one-fourth of the so-called prostate—a view which differs from that of all other anatomists, with the exception of Valentin, who does not, however, express himself satisfactorily upon the point.

If the pars prostatica urethræ be opened from the point by a longitudinal section through the prostate, and the mucous membrane taken away, the yellow longitudinal fibres of the crista galli appear to join the lower end of the trigone, and contain only a few scattered muscular fibres.

On both sides of the caput gallinaginis, and as far as the anterior wall of the urethra, there appear further similar yellowish longitudinal fibres, which form a strong layer towards the neck of the bladder, whilst, on the other hand, towards the pars membranacea they become more delicate.

This longitudinally fibrous layer of the pars prostatica is connected internally to the sphincter vesicæ by a weak and indistinct layer of fibres, with a few longitudinal bundles of the muscular coat of the bladder lying at the side of the trigone. It has, however, for the most part, no connexion with the muscles of the bladder, and consists half of cellular tissue, with many nucleus fibres, and half of organic muscular fibres, with their characteristic nuclei. Upon this layer follows, secondly, towards the outer side, a thickish layer of yellow circular fibres of muscular and elastic structure.

The proper glandular structure of the prostate occupies especially the outer and lower part, yet sends a few lobes into the circularly fibrous layer, its excretory ducts penetrating the longitudinal and transverse fibres.

It consists of a reddish-grey, or reddish-yellow mass, which may be very easily torn into fibres in the transverse direction. It may be said more exactly to radiate from the lateral parts of the crista galli, or the openings of the prostatic ducts.

Here are found, as Valentin has said, (1) a great mass of reddish fibres, the bundles of which join plexuses, yet run for the most part radially; and (2) the glandular mass and ducts of the prostate.

The first of these are almost all muscular. Their elements are very beautiful, being an abundance of organic muscular fibres, of moderate length and considerable breadth, similar to those of the bladder.

It may be readily comprehended that, under these circumstances, any muscular coating of the vesicles and ducts of the gland would be quite superfluous; they therefore possess only a coating of cellular tissue.

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The whitish-yellow walls of the vesicula prostatica consist essentially of cellular tissue, with many nucleus fibres, with which, in the neck of the vesicle, a few, and, at its base, a considerable number, of organic muscular fibres are mixed.

The prostate further possesses a strong layer of organic muscular fibres, which invest it externally on all sides.

In the pars membranicea urethræ the organic muscular layer is less developed. There is, under the mucous membrane, whose cellular tissue is distinguished by its richness in elastic structure, (nucleus fibres,) a layer of longitudinal fibres, which are connected with those of the pars prostatica. They consist for the most part of cellular tissue, containing nucleus fibres, and a smaller number of wavy, contractile, organic muscular bands, (fibre-cells,) which are sometimes partly isolated, and are more easily formed in fresh preparations than in those which have been acted upon by acetic acid, in which they are obscured by the many nucleus fibres of the cellular tissue.

They are 0.07—0.1 line long, 0.002—0.003 line broad; nuclei, 0.012 to 0.014 of a line.

Upon these longitudinal fibres follow externally transverse fibres in a considerable layer, which for the most part belong to the musculus urethralis. A part of them, however—viz., the inner layers—shows pretty strong bundles of organic muscle, with cellular tissue and nucleus fibres, and partly mixed with the animal bundles of the urethralis muscle. Still less developed in general are the organic muscles in the pars cavernosa of the urethra. Sometimes they are to be found just like the longitudinal fibres of the membraneous part. In other cases, longitudinal fibres may indeed be recognised under the mucous membrane, but no muscles at all among the cellular tissue and its nucleus fibres.

At a certain depth, however, we always meet with longitudinal fibres with a larger or smaller admixture of organic muscles, which fibres cannot be regarded as trabeculæ of the corpus cavernosum, since there are no venous spaces between them; but they from a continuous membrane, which limits the proper corpus cavernosum towards the urethra.

This layer might be regarded as belonging to the corpus cavernosum, and the existence of a muscular membrane belonging to the urethra at this part might be altogether denied; but it seems more natural to regard the whole corpus cavernosum as a very much developed muscular investment, provided with peculiar vessels. For these are found in the trabeculæ of this spongy body as far as the glans, mixed with cellular tissue, containing nucleus fibres, vessels, and nerves, and a great quantity of organic muscles, which render the whole structure eminently contractile.

In Cowper's glands I find neither in the gland vesicles nor in the long excretory ducts, any traces of muscularity; on the other hand, there is a very delicate investment round the gland, formed of organic muscles and cellular tissue; and there also exists a fibrous structure rich in organic muscles within the gland, which must afford very effectual aid in compressing and emptying it."—p. 70.

Female Urethra.—"In the urethra there is, besides an inner longitudinally-muscular membrane, also an outer transverse layer of smooth muscles, which, combined with the animal bundles of the musculus urethralis of the female urethra, must give it a very considerable power of contraction. The inner longitudinally-fibrous membrane contains only a few organic muscles which can hardly be isolated, and very often are made out with great difficulty among the abundant cellular fibres, nucleus fibres, and vessels.

The organic muscles in the very thick, outer, transversely-fibrous membrane, are more abundant; yet here, also, they are partly mixed with much cellular tissue, partly mingled externally with little secondary bundles of the musculus urethralis, the latter forming the outermost layer without any admixture of organic fibres."—p. 71.

(To be continued.)

REPORT OF A CASE OF CATALEPSY.

By C. T. Downing, M.D., London.

Mr. John —— was the son of an English merchant; his parents were healthy and intellectual, and, together with his brothers and sisters, gave no indication of nervous derangement; he himself as a boy was of cheerful disposition, but always very excitable.

As he approached the age of twenty, and was springing up rapidly in height, he was sent to school in France; where it is supposed that he was half-starved; at all events fed chiefly on vegetable diet, instead of the generous fare to which he had been accustomed. His health suffered much, and epileptic fits were the consequence. He then resided some time in Oporto. Here it appears that Mr. —— recovered in great measure his health and strength, and moreover formed an attachment to a Portuguese lady of the neighbourhood. His father, disapproving this connexion, removed him to London, and made him his agent in the wine business. At this time he was considered a fine young man, of gentle, prepossessing manners, and refined and cultivated intellect. But more than one cause served to disturb his mental equilibrium: allusion has been made to his unfortunate attachment; religious enthusiasm was now added, and moreover intense excitement and chagrin from zealous though unsuccessful efforts in business; perhaps also the large quantities of wine he was obliged to take with his customers, chiefly publicans, had some influence. Ample cause is thus apparent for the subsequent symptoms.

About two years ago, Mr. —— began to have delusions, with occasional fits of eccentricity of conduct; these at first were slight, but afterwards became severe. At length, upon his taking one of the children of the medical man in whose house he resided, up to the roof, and threatening to throw it and himself over the parapet, some restraint was considered absolutely necessary. He was removed to a private asylum near town. This step appears to have set the seal on the young man's misery, and made his mind prey upon itself with redoubled energy. He fancied that his friends had behaved with cruelty towards him, in sending him to the asylum; that his prospects for life were ruined, for how could he possibly hope to marry the lady of his affections now that he was declared a lunatic?

It may be interesting to those who pay especial

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attention to mental maladies, and not altogether beside the present subject, if the nature of the delusions under which the patient laboured at this and previous periods were stated. It appears that the disorder was chiefly that which is called *ambitious monomania*. He believed that he was a prophet—St. John the Evangelist; that he had a mission, and was endowed with gifts to conquer the devil, &c. There was also a constant tendency to iteration—to the repetition of the same words an infinitude of times, or to do the same thing over and over again; but there was not a tendency to suicide, except by the negative act of refusing food.

At length Mr. —— appeared so far recovered from his malady, that it was deemed unnecessary to keep him longer in confinement. He was therefore removed, on the 17th of April of the last year (1850,) to the house of Mr. Catty, at Putney. That gentleman has kindly furnished me with the following interesting particulars of the patient's condition during his residence with him:—When brought to the house he refused to move; when there, he spoke rationally on all general subjects, but was eccentric in his conduct; always prayed, for instance, in passing under door-ways; would not wear a hat, or allow his hair to be cut, &c.; otherwise docile. On April 28, at breakfast-time, Mr. —— was found in bed in a trance, in a perfect state of torpor, passing all his evacuations involuntarily, and taking food only when put into his mouth with a spoon. He had gone to bed the previous night apparently as well as usual, and no cause could be assigned for the accession. There was no rigidity, but he remained perfectly quiescent, and would answer no question, nor help himself with hand or foot; yet it appears that he was quite conscious during the fit, and proved this by referring to conversations that had taken place during the trance. This lethargic condition persisted with little variation for four weeks, at the end of which time he got out of bed, walked up and down the room, to the astonishment of every one, but took no notice of the by-standers, merely repeating the words "See Jesus," incessantly. In a few days he behaved rather eccentrically, prostrating himself on the ground repeatedly, and pouring cold water on his head, but by the 2nd of June had returned to his previous condition. During this state of trance, Mr. —— was seen by Sir R. Morrison, who considered the disorder a paralysis of volition, and prescribed croton oil and other medicines. Mr. Catty, also regarding the affection as seated chiefly in the spine, employed the tartar-emetic ointment freely to the surface. It is difficult to determine whether these remedies were serviceable.

After recovery, Mr. —— remained for five weeks tolerably well, although an evident deterioration of mind was observable. He was able to garden, take his meals with the family, and go to church; still he had the same delusions of being a prophet, and that peculiarity of repetition to which I have previously alluded was further developed. He would repeat the same word incessantly, and if asked by the children to draw something for them, would fill sheets of paper with a hundred images of the same object. I have seen a book used by him at this time, wherein page after page has presented row upon row of inkstands, or candlesticks, or continuous lines of the one word, "Jesus"—facts, I should think, extremely interesting to physiologists.

On the 5th of July, new phenomena presented themselves, which bear more immediately on the subject before us. On that day, our patient was found sitting up-stairs with his eyes closed. He looked very pallid, and scarcely answered when spoken to. He was placed in bed. At this time there may possibly have been some slight control over volition—for the eyes *seemed* to be voluntarily closed, and the evacuations discharged in bed wilfully. However, the symptoms rapidly increased in intensity. The next morning some slight rigidity of the arms was noticed, and subsequently of other parts of the body. He remained speechless; and would take food from a spoon, but never seek it, and passed his evacuations involuntarily.

By the 2nd of October, the cataleptic symptoms were fully developed—but without great rigidity. He could be moulded to any form, and his body, as well as limbs, retained for an indefinite time the position, however unnatural, in which they were placed. If placed on his legs he was like a post, and if taken up by the middle would lie like a log. He did not appear to be sensible to slight impressions, but contracted his features if much injured; his eyes were firmly closed; to no question would he give answer, and only occasionally would he take food. On this account, and to sustain life, the employment of the stomach-pump was required.

In this wretched condition, lying on his back motionless, our unfortunate patient remained during the months of October, November and December. He had short intervals of respite certainly, occurring at periods varying from three to seventeen days, during which he was able to speak and take food, but the general rigidity continued. It is curious that he spoke quite rationally at these times, but chiefly about food. He would mention the dishes that had been offered to him during the time that he lay apparently insensible, and when they were placed before him, or rather fed with them, would eat enormously. Like Captain Dalgetty, he seemed to lay in a stock of viands that should serve him in seasons of scarcity.

Various remedial measures were employed at this time. In October, for a fortnight a mild form of electro-magnetism was administered by Mr. Taxon, but the patient evidently lost ground, becoming weaker in consequence. About Christmas, the cold effusion was applied to the head, but from the alarming symptoms that ensued, the experiment was not repeated, and the rigidity seemed greater than ever afterwards. Dr. Todd, of King's College Hospital, was now consulted, and took principal charge of the patient from that period.

In order to be near his friends, Mr. —— was brought to town on Jan. 18, of the present year, (1851,) and placed in my house. He was still in the same rigid, cataleptic condition, and how the attendants contrived to remove him alive is to me a mystery.

When I first saw him, on the afternoon of that day, he was in bed, and there being occasion to remove the clothes, I observed the following particulars, which were certainly calculated to excite feelings of awe and deep commiseration:—The patient was lying nearly on his back, straight in bed, his long, lank figure, six feet three inches in height, reduced to an extreme degree of emaciation; scarcely a sign or vestige of life was perceptible; the surface was pale and cold, and the vital stream could scarcely be detected in the arteries; the eyes were constantly closed, and any attempts made to open them were forcibly resisted; the pupils seemed turned upwards; the teeth were firmly clenched, but the lips strongly separated, so as to give to the countenance the expression of a horrible sardonic grin. Upon attempting to move the trunk, the perfect rigidity of the whole mass was perceptible. It was one block of flesh, and reminded me of the frozen carcases of animals brought to the market of St. Petersburg, so stiff and cold as to break up only on the application of the saw or hatchet. The lower limbs were almost immoveable, but the upper extremities, which lay stiffly by the side of the body, could, by some exertion, be raised to an angle with it, and then retained immoveably the same position; in fact, they could be

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moulded at pleasure, as if constructed of wax or lead. The equality of action observable in the muscles of the arm, by which they retained this given position, was not so evident in the neck and trunk. The extremes were more powerfully brought into action, so as somewhat to arch the body backwards. At times this curvature was so great as to resemble that form of tetanus called opisthotonos. The patient rested mainly upon his occiput and heels.

It is difficult to say how far the muscles of organic life were affected with rigidity. The diaphragm seemed to be much contracted, and the intercostal and other muscles of respiration acted so feebly that the breathing appeared suspended, and could only be ascertained with certainty by the slight halitus deposited upon a mirror held before the mouth. No respiratory murmur was audible. A very feeble action of the heart could be detected by the stethoscope, and the pulse beat almost imperceptibly about sixty in the minute. In addition it may be mentioned that there was a strong, pungent odour proceeding from the body; arising, not merely from the motions, which were passed involuntarily, but from the constant dribbling of urine, which was highly ammoniacal. There was no heat of head, throbbing of the carotids, or other indication of cerebral congestion. As the patient remained perfectly quiescent, with the exception of coughing occasionally, and evinced no disposition to take food, it was necessary to administer nourishment by means of the stomach-pump. For this purpose the mouth was forcibly opened, by wooden and iron instruments constructed for the occasion. Considerable difficulty was experienced in separating the teeth; and when at length this was effected, and the tube introduced and withdrawn, the jaws remained rigidly open for an hour or more, and no effort we could make was sufficient to close them. During this rather severe operation, in which the front teeth were loosened, the patient uttered no cry nor gave other indication of suffering, except by a certain altered expression of countenance; yet there is every reason to believe that he was perfectly conscious of all that was done to him, and of every word uttered in his presence. Great attention was now paid to the comfort and cleanliness of the patient. The room was kept well warmed and ventilated. Rich broths were administered by means of the pump in the morning, and per rectum in the evening. As the bowels were inactive, an enema was given every third day. For a week little change was perceptible, except that the surface of the body became warmer, the countenance calmer, and the rigidity of the muscles somewhat lessened.

Jan. 22.—Dr. Todd attended to-day, in consultation with Mr. Beale and myself. Small doses of the sulphate of magnesia with liquor cinchonæ, were prescribed.

On the 27th, some tumblers of tepid water were poured over the head in the morning, and in the middle of the day an assafœtida enema was administered. Soon afterwards more evidence of animal vitality was apparent; the patient seemed more restless, and on extending the fingers of one hand gently, uttered a feeble cry of impatience or suffering. The joints of the fingers were observed to be swollen, as if with rheumatic gout.

On the morning of Jan. 28th, the cold effusion was again applied with no other effect than to cause the extensors of the neck and trunk to be much contracted. At about three P.M. the bowels acted naturally for the first time. In the afternoon, as the food given in the morning had been rejected, I used the stomach-pump once more, and added a glass of port-wine to the soup. Patient opposed considerable resistance to the passage of the tube, closing the fauces firmly with the tongue and soft palate. The fluid was, however, injected and retained. Soon after this, to the horror of the nurse, he opened his mouth and spoke, demanding "something solid." He required, in rapid succession, "poached eggs, pudding, hashed mutton," &c. He expressed impatience if it was not brought fast enough, and ate freely when the food was placed in his mouth. He seemed to have no control over any other muscles than those of the mouth and throat. He could not, apparently, open his eyes, and his limbs were as rigid as before. Subsequently he spoke kindly and rationally to those about him.

On the following day Mr. —— seemed in some respects so much better that we began to hope that the crisis was passed. Throughout the day he spoke at various times quite rationally, but rarely in answer to questions. As I was sitting in the room he suddenly asked me how I did, entered into a discussion as to the supply of water to the metropolis, expressed an opinion with respect to the advantages which water passed through granite had over that through lime, the way in which Oporto and some other continental towns were supplied, &c. Towards evening he declined again.

30th, the next day. The patient has quite relapsed into his former condition; will not speak or take food; perfectly rigid, especially about the jaws. Dr. Todd saw him; prescribed various medicines; chloric ether and laudanum were given by the rectum, and five-grain doses of quinine; these and other remedies unfortunately proved unsuccessful; the strength of the patient evidently declined, while the muscular rigidity increased. After a while, without risk of fracture it was no longer possible to separate the jaws; I passed a Eustachian tube, therefore, through the nostril, and injected some wine and broth into the pharynx; this appeared to occasion some distress, but was swallowed. In this way, and by enemata, the life of the patient was supported until Sunday, Feb. 16, when nature gave way.

On the morning of that day a complete change came over the scene. All symptoms of catalepsy vanished; the limbs were soft and flexible, and completely subject to the will of the patient as far as consistent with his failing strength. The power of speech was restored; the poor fellow recounted his sufferings: he had heard every word uttered in his presence, and was perfectly conscious of all that had been done to him. He had felt, he said, excruciating pain at times; he had felt the strongest inclination to express his feelings; but had been unable to utter a word or raise a finger for the purpose. The horror of this position may be imagined. In the afternoon the patient felt conscious of approaching dissolution—he knew that he should die that night. About midnight I was summoned to his bed; he was then in the throes of death; in a few minutes all was quiet—he was dead. Yet for some time the appearance was so similar to the previous cataleptic condition, that this fact could not be determined with certainty. However, the expression of the face was changed; no halitus appeared on the mirror, and the heart ceased to flutter: the soft and flexible limbs soon began to stiffen with the true rigidity of death.

Unfortunately no inspection of the body was allowed.

PLASTIC OPERATION FOR THE REMOVAL OF DEFORMITY AFTER EXTENSIVE BURNS OF THE FACE, NECK, AND CHEST.

By James Burdett Moxon, Esq., M.R.C.S.,
Brigg, Lincolnshire.

I trust that the following account of an operation which I performed some time since will be interesting to the profession:—

Mary Ann H——, aged twenty, was severely burned when eight years old, and the skin of the face, neck, bosom, and upper part of the arms, was destroyed to a

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very considerable extent. The resulting cicatrices occupied the whole of the lateral and anterior aspects of the neck, infringing upon the cheeks and chin, and descending inferiorly to the anterior aspect of the upper part of the thorax, to the pectoral fold of the armpit, and the adjacent parts of the shoulders and arms. They were bounded, superiorly and posteriorly, on each side, by a line passing from the ear to the apex of the shoulder.

These extensive cicatrices were arranged in projecting bands, varying in strength and rigidity, which passed from the chin to the thorax, and from the cheeks and base of the jaw to the shoulders. The head was bent forward and tied down to the bosom, so that the chin nearly touched the sternum. The bands between the latter points were vertical in direction, and very short, and the mylo-hyoidean region was therefore altogether absent. The lower jaw was permanently depressed to the full extent, the incisors pointing almost directly forward; the lower lip was constantly everted, and she had never been able to shut her mouth since the healing of the wounds. On each side the bands prevented any except the slightest rotation of the head, and movement from side to side. In point of fact, she could only move the head by moving the whole of the trunk. The shoulders had become elevated and drawn towards each other in front. This deformed condition had not prevented an accidental pregnancy, in consequence of which she had become chargeable to the parish, and an inmate of the union workhouse, in which I found her when I became surgeon to that institution.

After a good deal of consideration, (for she had applied at one or two hospitals, and an operation had been declined,) and at her earnest request, I undertook to perform an operation for the removal, to some extent, of the deformity, and its serious inconveniences, and even miseries. Mere division of the scars, and restoration of the head to its proper position, suffering the gap to fill up by granulation, would, as is well known, have been of no ultimate service. The new cicatrix would have contracted as much as the old. I therefore determined upon the adoption of a plan by which flaps of healthy skin would be obtained from the neighbouring parts, and made, in some degree, to supply the deficiency of integument on the fore and lateral aspects of the neck. I was led to this plan of operation by reading, in Chelius's "Surgery," a short account of the success which had attended Professor Mutter, of Philadelphia, in his treatment by this method of the deformities from burns. It is stated that he has operated successfully in six cases, all of them being cases of forward contraction of the neck, with depression of the lower jaw and eversion of the lip.

I operated on the 17th of March, 1847, assisted by the Messrs. Bennett, of Winterton. The patient having been brought under the full influence of ether, an incision, commencing in the sound skin, was made from ear to ear, the bands being divided by successive strokes of the scalpel. The head was then easily elevated, it being only necessary to touch lightly with the knife some points where the cicatrices had become adherent to the subjacent parts. In two of Mutter's cases, it was necessary to divide the attachments of the sterno-mastoid; in one, on both sides, and in the other, on one side, before the head could be restored to its proper position; but the head could be raised without dividing either in the third case. Reasoning, *à priori*, I was prepared to find in the present instance, that, from the lengthened period of twelve years, (commencing at the early age of eight,) during which the contraction had continued, the sterno-mastoid and other muscles would have become so permanently shortened as to resist the elevation of the head, and require division. I was agreeably surprised to find the head resume its normal position as easily as if it had only been flexed for a few minutes instead of twelve years. When the cicatrices were completely divided, and the head raised, the whole of the front and a great part of the sides of the neck were uncovered by integuments. The upper lip of the incision corresponded to the base of the jaw and chin, and the lower formed an irregular curved line, which, at its middle, passed a little below the top of the sternum. Two or three vessels needed the ligature, and a vein of considerable size bled profusely, and was also tied.

A flap of healthy skin was now obtained on each side by incisions between five and six inches long, extending from a little below the ear towards the top of the shoulder, where they were connected by an antero-posterior incision. The flaps were an inch and a half in width superiorly, and three inches inferiorly. They were dissected up towards the ear, and when the hæmorrhage had entirely ceased, were brought forward by a half-twist, and connected in front of the neck by the interrupted suture, two pins being used. Their upper and lower borders were stitched as closely as possible to the corresponding lips of the horizontal incision. The loss of skin was, however, so great, that several parts were necessarily left uncovered by integument. Above the sternum, and on each side of the neck, the lower borders of the flaps could not be brought into complete contact with the corresponding lip of the horizontal incision, and under the chin a large gap was left. It was, indeed, remarkable to witness the almost entire disappearance of the bands after they were divided and freed from their adhesions; above, a very short, irregular fringe along the base of the jaw was all that remained; and below, they had contracted in a similar manner. The wounds on the shoulders were united as much as possible by a couple of sutures above, and adhesive strapping; lint, dipped in cold water, was placed over all; a four-tailed bandage supported and fixed the lower jaw; a roller was passed lightly round the neck, and the patient was put to bed. She had felt no pain during the operation—a circumstance which gave me great delight, as it was the first time that I had witnessed the effect of ether (chloroform being then unknown) in rendering the subject of a surgical operation insensible to pain. It being of great importance to maintain the head in its proper position, and to keep the parts in a state of, as near as possible, perfect rest, the head was laid on a level with the body, the patient being, of course, upon her back, and the neck was supported by a pad underneath, for the purpose of gently pressing forward the integuments of the neck, and thus lessening the strain upon the ligatures in front. No food was allowed, except milk and broth, for several days, and she was constantly watched by an attendant.

On the third day, the dressings were removed, and the flaps found to be adherent to the surface on which they had been laid, and also, in several places, to the upper and lower borders of the horizontal incision. The extremity of the right flap, however, had lost its vitality, and a small slough was formed. Adhesion between the flaps in front was, therefore, out of the question; and when the pins were removed, I was mortified to find that they gradually separated from each other, until there was an interval of an inch, and the uncovered spaces beneath the chin and above the sternum were united.

The places on the neck and shoulder from which the flaps had been obtained, and the uncovered spaces generally, were beginning to granulate. The state of the system was satisfactory.

I forbear entering upon any detail of the progress of the case; it is sufficient to say that it was satisfactory,

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though tedious, and required a great deal of care and attention. The flaps were brought as forward as possible, by means of adhesive strapping, and cicatrization encouraged by the use of the usual means. During the succeeding two months, the flaps became adherent along both borders, leaving mere linear cicatrices; the spaces on the shoulders healed up, and formed triangular scars; but the interval between the flaps, and the uncovered spaces above and below, cicatrized much more slowly, and when a small sore of the size of a shilling alone remained, several weeks passed over before it would heal.

I find in my note-book, that in November the whole was soundly cicatrized, and that her condition is described as follows:

"The head is pretty nearly in its proper position, and can be moved from side to side, and rotated, with ease. The lower jaw can be raised, and the lips approximated. The eversion of the lower lip is completely removed. On the sides of the neck, the new skin is seen to intervene between the scarred portions above and below it, the boundaries of each being distinguished at a glance, by the one being of a brown colour, and the other white. There is no projecting band, and but very little tension. In front, where the flaps failed to unite by the first intention, there is a band which passes down from beneath the chin to the sternum, and in some degree limits the elevation of the head. With this exception, the operation has proved as successful as I hoped, and her former condition of miserable deformity is so much mitigated, that she will be able to get her own living as a domestic servant."

Since then, I have seen her every now and then, and have been gratified at the gradual improvement which has taken place in her appearance. The flaps on the sides of the neck have become much wider, and she has now at least three inches of *sound* integument in the vertical direction on each side. The colour and puckered appearance of the cicatrices have also in a good measure disappeared, and the band in front interferes very little with the movements of the head and jaw.

CONTUSED AND LACERATED WOUND OF THE SPHINCTER ANI AND LOWER PART OF THE RECTUM, EXTENDING ALONG THE ANTERIOR AND POSTERIOR PERINÆUM.

By E. W. Tuson, Esq., F.R.C.S. &c.

On the evening of the 26th of October I was sent for by my friend Mr. Tucker, of Berners-street, to see a case he had been called to. On my arrival at the patient's residence, in Long Acre, upon examination, I found that the external sphincter ani muscle had been torn through; that the rectum had been lacerated, both at its anterior and posterior boundary, the wound extending to more than an inch towards the os coccygis, being deeper at the fore part of that bone than at other parts of the laceration; anteriorly it extended more than half an inch, but the urethra was quite free from injury; there was prolapsus of the mucous membrane of the rectum, which presented a lobulated appearance. The patient was forty-two years of age, and occasionally of an irregular mode of living. The accident had happened by his falling (while he was getting through a trap-door in a loft) upon the post of a French bedstead which had a knob at the upper end, which must have entered the rectum through the sphincter ani; the patient then falling to the ground, the knob of the bedpost lacerated the sphincter and rectum, deflecting a portion of the nates, on the right side, to an extent of some inches laterally. The whole wound presented a very formidable appearance, which the prolapsus ani increased. A question arose—What plan of treatment should be pursued? Should a portion of the wound be brought together by sutures, or not? It was impossible to bring the whole of the wound together without closing the anus. I resolved to return the prolapsus, which was done with some difficulty, but it protruded immediately after I removed my fingers; and as its reduction caused considerable pain, and as it was evident that owing to the division of the sphincter it could not be retained in its natural situation, no further attempt was made. I next brought the anterior and posterior parts of the wound together by two sutures, one being placed between the anus and os coccygis, and the other between the anus and scrotum; water dressing was next applied, a graduated compress, and a T bandage. There had been some loss of blood, which had stopped before we examined the wound. An opiate was given to the patient. On the following morning, we found he had passed a very restless night. He complained of pain in his chest, over the region of the heart, also at the pit of the stomach; the skin was dry; tongue furred and clammy; pulse 80, feeble, intermittent, and compressible. He was allowed a glass of port wine and water, some beef-tea during the day, and was ordered a draught, composed of solution of acetate of ammonia, half an ounce; decoction of bark, one ounce; compound tincture of cardamoms, one drachm; to be taken every six hours.

On the third day after the accident the wound sloughed, the sutures were torn through, and the whole of the exposed surface presented a very unfavourable appearance. The sloughing portions were dressed with a solution of chloride of cardon, half a drachm to eight ounces of water; warm water dressing applied; a compress and T-bandage. He was to take mockturtle soup, some game for his dinner, and about five or six glasses of wine in the course of the day. Ordered, decoction of bark, an ounce and a half; tincture of bark, one drachm; aromatic confection, one scruple, every six hours, with a pill of one grain of opium. The following day the slough evidently extended. The patient had passed a very bad night, was delirious; the hand was unsteady, and he suffered much in his chest. Delirium tremens was added to the sloughing of the wound. Four grains of quinine every four hours; a pill of opium, also every four hours, was taken, and a grain of muriate of morphia at night. The quantity of wine was increased and some bottled stout ordered. This plan produced a change for the better: some sleep at short intervals was procured, and a few days afterwards the sloughing parts began to separate, healthy granulations appeared at some places, but the slough towards the anus still remained. The same plan of treatment was followed, excepting the opium being so frequently taken, and a marked improvement was apparent.

Up to the eighth day the bowels had not acted. A pint of gruel, with two ounces of castor oil, was given as an enema, which was retained. On the ninth day, the injection was repeated, but it soon returned unchanged. An aperient draught was ordered to be taken the last thing at night, and the injection on the following morning produced a free evacuation. The prolapsus completely sloughed, and also the whole surface of the wound, at some places to a small extent, at other parts to a greater depth. The wound gradually contracted, and at the end of seven weeks he was quite well. The motions passed freely without pain, and he was able to pursue his usual occupation without any inconvenience.

It was interesting to watch the progress the wound made after the slough had separated, and it was doubtful what the condition of the parts would be

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when completely healed. The muscular fibres of the sphincter muscle have united; and it was remarkable that Nature restored this muscle with its normal power, particularly after so much of the muscular fibres, both at the anterior and posterior part of the wound, must have been removed. The prolapsus was also cured by the sloughing of the mucous membrane, which removed all appearance of any projection, and when the wound had healed, the parts were in a natural condition. The wound was brought together by sutures, for the purpose of preventing the edges becoming everted. also for producing a degree of support to the prolapsus, so as to prevent a greater portion protruding.

CASE OF POISONING BY BELLADONNA.

By George Edwards, Esq., M.R.C.S.

Miss G——, aged thirty-four, unmarried, of slight figure, fair complexion, and nervous temperament; has been an invalid for many years; is the subject of lateral curvature of the dorsal vertebræ, for which she has on several occasions undergone a good deal of professional treatment. Such are the physical characteristics of the individual I was called to see under the following circumstances:—

January 8th, at eight o'clock, A. M., I received a verbal message from her sister, (at whose house Miss G—— was visiting,) accompanied with an ounce-and-a-half phial, labelled "embrocation of belladonna," to the effect that Miss G—— had just swallowed the contents of the bottle, instead of an aperient she intended to take. Having an emetic draught close at hand, in my dressing-room, I sent it down, requesting it might be administered immediately, and that I would call upon her as soon as I could. In about half an hour I arrived at the house, and found my patient stretched upon a couch, and presenting the following appearances:—Head bent forward upon the chest, speechless, eyes closed, breathing heavy and stertorous; pupils widely dilated; hands and feet cold; pulse scarcely perceptible; jaws firmly fixed. At this time there was not the least convulsive action, but a constant disposition to raise the hands to the face. Notwithstanding she had taken the emetic, together with copious draughts of mustard-and-water, no vomiting had taken place. I lost no time in directing my servant to procure the stomach pump, and also the assistance of my friend, Dr Topham. In the meantime I roused the patient by having her raised up and shaken, upon which she appeared conscious when spoken to, but had lost all power of answering any question addressed to her. Her teeth being closed, we had great difficulty in getting any liquid into her mouth, nor was she capable of swallowing it when we did. By compressing her nostrils and forcing her to breathe through her mouth, the teeth became sufficiently separated to enable me to introduce a long feather into the back of the fauces; this soon produced copious vomiting of a large quantity of a green colored fluid, strongly impregnated with camphor. This operation was repeated two or three times, each one producing more or less vomiting of similar matter. Hot water was applied to her feet, friction to her hands, and sal volatile to her nose. The same uncontrollable disposition to heavy comatose sleep still existed. At ten o'clock Dr. Topham arrived with the stomach-pump, which we immediately proceeded to use; but from the rigid closure of the jaws we had great difficulty in separating them sufficiently to adjust the gag, and pass the œsophagus tube into the stomach; after some trouble this was effected, and about a pint and a half of warm water was injected, and then carefully withdrawn; it was of a greenish hue, and strongly impregnated with camphor. We continued to wash out the stomach with warm water and slight quantities of aromatic spirit of ammonia, until the fluid withdrawn was quite colourless and devoid of the smell of camphor. We then threw into the stomach a breakfast-cup-full of strong coffee, to which had been added three teaspoonfuls of aromatic spirit of ammonia, and withdrew the tube. The pulse had risen considerably and the countenance had assumed a more natural appearance; a mustard poultice was applied to the epigastrium; she was put into a warm bed, with hot flannels to her feet, and suffered to dose.

The following facts were elicited from her sister:—She says that at half-past seven, A. M., she was aroused by a loud knocking at her bedroom-door, on opening which, she saw Miss G—— in her dressing gown, presenting an appearance of great alarm and anxiety. She informed her what had happened and that the medical man who prescribed the embrocation had cautioned her to be careful, as the smallest quantity swallowed would be fatal. At this time she only complained of "a sensation of madness in her brain." She was enabled to speak and swallow perfectly well until a few minutes before my arrival, when she appeared to lose the power of executing both those acts quite suddenly, and fell into the comatose condition in which I found her.—Twelve o'clock: There seemed to be a gradual improvement in her breathing, circulation, and general appearance; there was a slight twitching of the muscles of the right side of the face; not able to swallow; but we fancied she, in answer to a question put to her, said "Yes."—Five. P. M.: Symptoms remained much the same as last report; no evacuation from the bladder or bowels; pupils widely dilated and immoveable; has slept a good deal; skin warm; pulse 112, feeble; still unable to speak or swallow.—Nine, P. M.: Countenance more natural. There was constant nictitation and picking at the sheets; if touched by any person, she jumped as if in great alarm. This I observed to occur whenever her hair was removed from her face, or when I felt her pulse. When thoroughly roused, she answered in monosyllables, and apparently attempted to form connected expressions, but they were unintelligible: pupils still greatly dilated; nor did they contract when a lighted candle was placed before the eyes; pulse 120; no action from bladder or bowels. On asking her if her throat was sore, she answered, "Dry;" on asking her if she could suck an orange, she said "Yes." I therefore had some orange-juice squeezed into a glass, and by means of a teaspoon, got her to swallow perhaps half an ounce; but this was accomplished with great difficulty. Ordered an injection of a pint of gruel with half an ounce of oil of turpentine, and an ounce of castor oil to be administered directly, and, when able to swallow, the following mixture:—Spirit of nitric ether, three drachms; compound tincture of cardamoms, two drachms; camphor mixture, five ounces and a half; mix.

To take an ounce every three hours.

9th.—Eleven, A. M.: Has passed a restless night, sleep being much disturbed by frightful dreams; complains of intense pain in the head, and says it feels enormously large, as also does her throat; is much annoyed by a constant sensation of trembling in all the muscles of her body; bowels were moved after the injection, and some urine passed at the same time, none since: great intolerance of light and noise; tongue rather dark, but moist; skin natural; complains of thirst; pulse 88; pupils as dilated as ever. She says she can see me distinctly for a moment only, and then my face becomes horribly distorted. The power of speech seemed to return about twelve or one o'clock, at which time she was very delirious, and would persist that there were very horrid monsters all over the room

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staring at her. Ordered eight leeches to the temples; effervescent mixture every three hours; and two grains of calomel, with seven of extract of colocynth, to be taken directly. She says she remembers my coming to her yesterday morning, but was unconscious of everything afterwards until the evening.

10th.—Better; head much relieved by the leeches; passed a restless night, her sleep, she says, being disturbed by "miserable phantoms;" bowels have been relieved two or three times, and urine has been excreted copiously; skin moist; pulse 100; slight thirst; pupils still unaffected by light; complains of the trembling of her muscles, but has lost the sensation of her head and throat being enlarged. Continue effervescent mixture, and to take some beef tea.

11th.—Improved in every respect; pupils not so widely dilated, are now slightly affected by light. To sit up on the sofa, take nourishing diet, and tonic medicine.

From the above date gradual amendment took place, and the power of vision slowly returned. It was, however, some days before she was able to walk, even with the assistance of a person on each side of her; this inability to walk did not arise from weakness, but she appeared to have lost all power of controlling the action of her legs.

Remarks.—This case is interesting, inasmuch as we possess but few opportunities of witnessing and recording the symptoms arising from the exhibition of poisonous doses of belladonna. The quantity taken, I afterwards ascertained from the medical man who prescribed the embrocation, was one drachm of extract of belladonna in an ounce and a half of soap liniment. Coma preceded any convulsive action by some hours, the twitching of the facial muscles not being perceptible until twelve o'clock. The pneumogastric nerves were early influenced by the poison, as evidenced by the difficulty of articulation and deglutition. Orfila found that belladonna given to dogs frequently produced weakness of the posterior limbs. This effect was most palpable in the case before us, my patient being unable to control the actions of her legs for some days after all the other symptoms had quite subsided.

ON THE DRACUNCULUS, OR GUINEA-WORM OF INDIA.

By J. Berncastle, M.D., M.R.C.S., &c., London.

During a three months' stay in the Bombay Presidency, I had frequent opportunities of observing cases of this very remarkable disease. Its most common seat appears to be in the feet and legs, but other parts of the body are not exempt. Some pain is often felt; and a pimple appears, which becomes inflamed, and remains chronic, or terminates as a boil: this first calls the attention of the patient to the spot, and he seeks for medical aid, when the diagnosis is soon made out by the worm being distinctly traced with the finger in its course underneath the skin, and feeling hard like catgut. An incision is carefully made at the spot where it was first detected, and the worm being seized with the forceps, is drawn out gently, and wound round a quill, care being taken not to break it by any sudden pull, as it would be very painful to fish it out again from the wound into which it might have retracted. If, after having drawn out a certain portion, there is much difficulty in obtaining any more without using undue force, the quill, with the part wound round it, is carefully secured with a bandage to the patient's leg, and on the next day, he undergoes another sitting, and so on until the parasite is entirely extirpated: *sat cito si sat bene* is here the guide. The operation sometimes causes great pain, according to the nervous sensibility of the part. Some persons have more than one worm at the same time in different parts. Both Europeans and natives are subject to the affection: I met many of the former who had suffered from it, but they were residents. I never knew a casual visitor to India to be similarly affected. The origin of the *dracunculus* is very obscure, and nobody seems to have any idea of the cause of this parasitical animal locating itself in the human subject. Some have thought that bathing in the tanks might occasion it, but there does not appear sufficient ground to establish that as a cause. The disease is common, the diagnosis easy. The treatment, as I have stated, consists in extirpation of the worm entire, which is generally performed by native barbers, who are very expert; and in hospitals it is generally left for them to do by the surgeon. I saw in Bombay a medical friend perform the operation on a Portuguese gentleman successfully before a pimple had formed. The worm was wound round the ankle and foot, in that tendinous region, and could be easily traced with the finger under the skin. A small incision was made over the most distinct portion that could be felt, and the worm being seized with the forceps, was drawn out in the usual way, causing great pain to the patient, who would not submit to the entire extraction, but returned the next day to have it completed. In going round the Poona native hospital, Dr. Deas, the chief surgeon, gave me a *dracunculus*, just extracted from the leg of a Brahmin by the native assistant. This specimen is three feet in length, about as thick as a crow's quill, and not unlike white gutta percha in colour and texture. Both ends appear alike to the eye; the microscope probably would detect a difference. In the Sir Jamsetjee Jeejeebhoy Hospital, at Bombay, I noticed several cases for operation, and some recovering from it. The abscess caused by the worm, if neglected, becomes troublesome, and degenerates into unhealthy looking ulceration of the part.

ON THE USE OF TURPENTINE IN MIDWIFERY.

By John Evelyn Crook, M.R.C.S.E.

The turpentine enema, although frequently used, and with the best results, in abortions, to bring on reflex action of the uterus, and expel the ovum when unduly retained, has, I believe, been rarely, if ever, resorted to in labours under similar circumstances, the ergot of rye been almost exclusively used for that purpose; yet, from the success that has attended the many cases in which I have used it where the uterine action has been deficient, I am convinced that turpentine, when properly applied, is a most valuable remedy. I believe that the stimulant, acting upon the excitor nerves terminating in the rectum, is more sure to bring on the reflex action of the uterus, than when the same is taken into the stomach, and has also the advantage of not causing vomiting. On referring to my book I might give you a long list of cases where the os uteri has been fully dilated, the head tolerably low down, and the membranes ruptured, yet, from want of the requisite pains, (notwithstanding the administration of the ergot,) the woman has remained four, five, and even six hours, much in the same state, the labour making little or no progress; but upon the injection of the turpentine, good pains have come on, and the patient has been quickly delivered. I generally use about three ounces of turpentine, mixed with about the same quantity of mucilage.

Should you think this paper worthy of insertion in your popular journal, I shall feel obliged by your doing so, and I doubt not but those of the profession who make trial of it, will find it save them and their patients many hours of unnecessary anxiety and pain.

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PLACENTA PRÆVIA.

By G. F. Knipe, Esq., M.R.C.S.,

Surgeon to the Leigh District of the Martley Union.

Mrs. J——, of this parish, aged thirty four, pregnant with her fourth child, on March 1, 1851, after a long walk, was seized with severe uterine hæmorrhage, being then in the eighth month of her pregnancy. This yielded to the local use of cold, the internal administration of astringents, and the recumbent position; but recurred, from time to time, on her endeavouring to attend to her household work.

On the 23rd of March, at eleven A. M., when coming down stairs, she was attacked with flooding, accompanied by expulsive pains. At four P. M., I saw her: countenance pallid, and its expression anxious; pulse small and thready, scarcely perceptible; skin cold, clammy, and bathed in perspiration; uterine contractions, I was told, had ceased for nearly two hours; she was actually deluged with blood. I gave her fifty drops of tincture of opium, in a glass of brandy. In ten minutes, I introduced my hand, and found the os uteri slightly patent, but easily dilatable; I passed my hand under the anterior margin of the placenta, and immediately felt the head in its proper position, but high up; I grasped the legs, and brought them down into the vagina, without my hand exciting the slightest contraction in the womb, or any resistance from the patient. I then administered half a drachm of secale, in some brandy, and caused pressure to be made over the uterine region. In about five minutes, contraction of the uterus was excited, slight at first, but increasing in strength as the pains recurred. In half an hour the child was born; the placenta was expelled in a few minutes after; and from that time, setting apart the large mass of clotted blood which accompanied its expulsion, she lost no more than is common in the best labours. She is gradually recovering.

The only thing in the above case I should wish to draw the attention of the profession to, is, the marked benefit derived from the ergot of rye. With regard to the question at present in agitation—viz., extraction of the placenta, or turning the child—I can give no opinion, having never tried the former plan; but out of three cases of placenta prævia which have unfortunately occurred in my practice, two I have treated as above, with success as to the mothers and the loss of one child. The third was unfortunately dead when I arrived at her house.

ON A CASE OF ACUTE LARYNGITIS.

By William Braybrooke, M.R.C.S.E., Army Medical Staff, Ceylon.

Babba, a tall, thin, delicately-formed Cingalese, aged thirty, admitted into the Gaol Hospital at Hambantotte, the morning of the 9th of February, 1851, with the following symptoms:—Countenance anxious; breathing impeded and hurried; voice husky and thick; inability to protrude the tongue, which was, as far as could be seen, dry, and very much coated; constant spitting of thick, tenacious mucus; deglutition appeared impossible; pressure over the larynx and trachea caused intense pain; and the whole of the trachea appeared swollen; pulse 100; skin hot and dry; bowels confined. A large opening made into the vein of right arm, and bled to syncope; about thirty ounces collected before he fainted; a strong injection immediately; and as leeches were not to be procured (owing to an extraordinarily long season of dry weather), a large blister applied all over the throat, and after it had risen, dressed with strong mercurial ointment.—Twelve o' clock: Much the same, large quantities of mucus running from his mouth; deglutition still difficult; voice gone; bowels acted; pulse reduced in number and strength.

10th.— Blister rose well; dressed with ointment; blood puffed, and cupped; other symptoms remained the same; every attempt to swallow caused spasm and the rejection of the fluid through nose; skin moist; countenance still anxious; unable to lie down; passes restless nights; blisters again applied all over the throat on the evening of this day; no medicine given internally.

11th.—Dangerously ill. Breathing hurried; sense of suffocation; countenance expressive of great suffering; large quantities of mucus clinging to, and dropping from mouth; larynx tender; voice a mere whisper; any attempt to look into the mouth caused great pain; pulse 80; bowels acting regularly and naturally. As the blisters did not rise so well as they were expected to have done, linen was spread with emblast. cantharid., and carefully applied to the whole of the throat.

On the 12th, expecting to find him the same, if not worse, was agreeably surprised at seeing him much improved. Breathing easier; countenance less anxious; tongue could be protruded to some distance; deglutition easier; and the mucus diminished in quantity and more easily expectorated; voice returning, though weak; pulse 80; skin moist. The blisters had risen remarkably well. Finding he could now swallow without increasing his sufferings, calomel in two-grain doses were given three times a day, with a mixture composed of nitrate of potash, five grains; tartar emetic, a quarter of a grain; in one ounce of camphor mixture every three hours; sago and sugar as diet. From this date he gradually improved; the voice became natural, and deglutition was performed without any pain. After taking the remedies already mentioned for two or three days, he was discharged quite well, and resumed the hard labour to which he had been sentenced. At one time, the operation for tracheotomy was in contemplation, but postponed, and with what wisdom, the result of the case proves.

OBSERVATIONS ON THE CÆSARIAN SECTION.

By G. B. Knowles, Esq., F.R.C.S., F.L.S., &c.

Professor of Botany and Materia Medica in Queen's College, and Surgeon to Queen's Hospital, Birmingham.

In the discussions which have recently taken place at the meetings of the Medico-Chirurgical Society on the subject of Cæsarian section, as reported in The Lancet, I perceive that allusion was made to my successful case of Cæsarian operation. As some years have now elapsed since the publication of that case, it may not, perhaps, be uninteresting to some of your readers to be made acquainted with a few particulars respecting it. The operation was performed in May, 1835, and in the autumn of the same year brief notes of the case were read in the medical section at the meeting of the British Association in Dublin. By some unaccountable mistake, it was announced that the operation had been performed by Mr. Knowles, of Manchester, instead of Birmingham, and was so reported in the various periodicals of the day. The same error has been repeated even a few months ago, in the *Edinburgh Journal of Medical Science*, and also in the new edition of Dr. Churchill's Midwifery. I have thought it right, therefore, that the error should be corrected, and I am induced more especially to bring the case again before the notice of the profession, in consequence of a remark made by Dr. Lee, in his speech at a recent meeting of the Medico-Chirurgical Society, already alluded to. Dr. Lee, after excluding (and apparently with great propriety) the case of Mary Donelly, and that of Mr. Barlow, proceeds to state that "Mr. Knowles's

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case, and that of Mr. Cluley, related by Dr. Radford, are the only two real cases of recovery out of the fifty performed in Great Britain and Ireland; *and whether these persons are now alive, and in what condition they are, no one can tell.*" My patient, Sarah Bate, at the time she underwent the operation, was thirty-six years of age. She had had four labours and four miscarriages in about eight years, and it was during the period in which these miscarriages took place that the disease in her osseous system was supposed to have commenced, as she became very lame, and complained of constant pain about the hips and loins, which she believed to be rheumatism. In her last, or ninth pregnancy, I did not see her till labor had commenced at the full period of utero-gestation. After a most careful examination, (in which I was assisted by my friends, Mr. Wood, senior surgeon to the General Hospital, Mr. Wickenden, and the late Dr. Ingleby,) it was ascertained that the space left by the distorted bones was only *two inches in the transverse by less than one in the antero-posterior diameter.* The sacrum and lower lumbar vertebræ had, in fact, so far projected and descended into the cavity of the pelvis as to occupy the greater portion of its space. This will readily be imagined when it is stated that after her recovery she was found to have diminished in stature full *nine* inches. In such a case there could be no question as to the mode of practice to be adopted, and even Dr. Lee, I should think, must admit that in such a degree of deformity the Cæsarian section was the only alternative. Of the propriety of inducing premature labour in certain cases of deformity, (a mode of practice to which Dr. Lee very justly attaches great importance,) there cannot be a doubt in the mind of any experienced practitioner in midwifery. I had recourse to it myself many years ago, and with the happiest results. But at the full period of utero-gestation the choice will sometimes lie between craniotomy and gastro-hysterotomy. To decide upon the *possibility* of delivery by craniotomy in cases of *extreme* deformity, is, doubtless, a point of no small difficulty; for let it not be forgotten, that under such circumstances it is one thing to extract, and another to extract with *safety*. My experience, in fact, leads me to believe that craniotomy has often been attempted, and perhaps effected, when gastro-hysterotomy might have afforded the patient an equally good, nay, probably, a better, prospect of recovery; for I am of opinion that if all cases of craniotomy were recorded that have terminated unfortunately, they would form a most fearful and appalling catalogue. Baudelocque, indeed, does not hesitate to assert, that if practitioners had recorded all those cases in which they have delivered, or attempted to deliver, by the use of the crotchet, as has been done with regard to those who have undergone the Cæsarian section, it would not be difficult to prove that many more women have died from the use of the crotchet than from the Cæsarian operation. At the same time it must be freely admitted, and should be regarded, indeed, as a general rule, that where there is sufficient space to admit of delivery by the crotchet, and with a reasonable prospect of safety to the mother, we should never hesitate to have recourse to this mode of practice in preference to the Cæsarian section. This, in short, is *a general rule*, which is invariably kept in view, and acted upon by every experienced and well-informed practitioner; inasmuch as the life of the mother must always be considered as more valuable than that of the child. I cannot but wonder, therefore, that Dr. Lee, in his reprobation of the Cæsarian section, should have so far forgotten himself, and the courtesy that is due to the profession, as to have made, in the course of his speech already alluded to, the following unwarrantable observations:—"This rage for cruel and bloody operations (says Dr. Lee) has spread far and wide, and attempts are being made on all sides in this country, at the present moment, to pervert and corrupt the sound and fundamental doctrines of English midwifery. As a public teacher, and holding a public position, my conscience will not permit me to remain a silent witness of such abominations."

This is truly a most serious, and, I must add, a most unwarrantable charge. Are not the accoucheurs in general as anxious for the welfare of their patients as Dr. Lee? Would they venture upon the hazardous operation of the Cæsarian section, except as a *dernier ressort*? Certainly not. Where, then, are we to look for *this rage for cruel and bloody operations?* Where are *attempts being made to pervert and corrupt the sound and fundamental doctrines of English midwifery?* Nowhere, I verily believe, except in the angry mind of Dr. Lee. Nor am I disposed to admit that Dr. Lee's conscience is more sensitive upon these points than are the consciences of those against whom he has directed his attack. And what, after all, are the circumstances that have called forth these severe animadversions? It appears that the Cæsarian section has been performed lately in two or three cases in which, according to Dr. Lee, the operation was unnecessary. In Mr. Skey's case, for instance, Dr. Lee maintains that he could have effected delivery with the perforator and crotchet, although the diameter from the base of the sacrum to the symphysis pubis was only an inch and an eighth. I have no doubt of the adroitness of Dr. Lee in the use of these instruments; yet I much question the possibility of effecting delivery by cephalotomy in such a case with safety to the patient; and such appears to have been the opinion of the distinguished practitioners who met Mr. Skey in consultation. It seems that neither Dr. Lee, Dr. Collins, nor Dr. Joseph Clarke have ever met with a case in which the Cæsarian section was necessary. This is remarkable, and yet very possible, even in the very extensive practice in which these gentlemen have long been engaged. That cases do sometimes occur, however, in which delivery *per vias naturales* is utterly impracticable, and in which the Cæsarian section offers the only possible means of relief, is a fact that cannot be denied. The necessity for this operation, says Baudelocque, is no longer a problem; it cannot now appear doubtful to to any persons, except to those who are interested in opposing it, whatever may be the motive by which they are actuated. Its necessity is as fully established as that of lithotomy, to which no one will dare to object; because it is, in some instances, as impossible to extract a child through the natural passage, as to bring from the bladder a large stone through the urethra. The Cæsarian operation has this peculiarity, that it is always urgent; whilst lithotomy is scarcely ever so; that the least delay in the former may render it useless to the child, and more dangerous to the mother; whilst the latter may perhaps be deferred without any material inconvenience.

It is more than probable that recourse has been had to the Cæsarian section, when the patient might possibly have been relieved by cephalotomy: but has no limb ever been removed by amputation which might have been saved by other treatment?

In the case of deformity at Cupar, in which Dr. Simpson was consulted, and in which it was decided that the Cæsarian section would be necessary, the patient was very unexpectedly delivered, and even without instrumental assistance. Dr. Lee exults in this unexpected termination of the case; and so must every one who possesses the common feelings of humanity; but has it not frequently happened that a case of hernia, after resisting all attempts to return it, has receded spontaneously, while the surgeons were deliberating upon the probable necessity for an operation?

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But Dr. Lee does not seem to be aware of the fact (or else he withholds it) that the operation has been much more successful on the continent than in this kingdom. The statistics in this matter are, in all probability, not strictly correct; and yet if allowance be made for various fatal cases not recorded, we shall find, even then, a considerable number of well-authenticated cases, amply sufficient to prove that recovery after this operation is not so hopeless as Dr. Lee would wish to make it appear. M. Simon, in his "Recherches sur l'operation Cæsarienne," has investigated the subject with great labour and accuracy, has proved the possibility of operating with success on the living mother, and pointed out the peculiar circumstances under which it ought to be performed. The successful cases enumerated by him amount to seventy-three; among which are four instances in which the same woman had undergone the operation twice; two, three times; one, five times; one, six times; and one, seven times. The successful cases enumerated by Baudelocque as having occurred since 1750, amount to *one hundred and thirty-nine;* the unsuccessful ones to *ninety-two.* There is no doubt, however, that this statement is incorrect, as regards the number of unsuccessful cases. But among modern practitioners, no one seems to have performed this operation so frequently, and with such extraordinary success, as Dr. Hæbeke of Brussels, who is stated to have performed it thirteen times, and thus to have succeeded in saving ten mothers and nine children.

A few years ago, I was favoured by Professor Gibson of Philadelphia with notes of his two interesting cases of Cæsarian operation, which were performed by that distinguished surgeon upon the same woman, and were both equally successful. The first was in March, 1835; the second in November, 1837. It appears, according to Dr. Gibson's account, that these were her third and fourth labours; and that in her two previous labours she had been delivered with great difficulty, after the destruction of the child by cephalotomy. Here again the Cæsarian operation was not performed until it was ascertained that delivery by cephalotomy could not be effected with safety to the patient. I do maintain, therefore, (notwithstanding Dr. Lee's condemnation of the Cæsarian operation,) that where the deformity is such as to make it scarcely possible for cephalotomy to be performed with safety to the mother, we are bound to consider the safety of the child, and are perfectly justified in having recourse to the Cæsarian section.

But it is unnecessary to carry the argument farther; —and I will merely add, for the information of Dr. Lee, and others who may feel interested in this matter, that my Cæsarian patient, Sarah Bate, *lived five years after the operation,* when she died of pulmonary consumption; her husband having died about twelve months previously of the same disease. The child *lived ten months,* when it was suddenly taken off by a fit of convulsion.

DEATH FROM RUPTURE OF THE FALLOPIAN TUBE DURING EXTRA-UTERINE PREGNANCY.

By Francis Rogers, M.R.C.S., Hants.

On the 14th of last October, I was requested, in my way through the village of Warnford, to call on Mrs. Eliza C——, the wife of a respectable man, in the employ of E. R. Tunno, Esq. She represented herself to have been unwell for some days, and attributed her indisposition to over-exertion. The statement and the symptoms were as follows:—Considered herself pregnant; believed she was about to miscarry; had laboured under an uterine discharge for some weeks; twenty-eight years of age; mother of five children. The tongue was moist, but coated at the root; she had been sick two or three times; complained of weakness in the back; abdomen tense, but free from pain on pressure; the pulse about 75; the skin moist; face covered with large drops of perspiration. I ordered for her compound infusion of roses, eleven ounces; syrup of orange-peel, an ounce; diluted sulphuric acid, a drachm; tincture of hyoscyamus, two drachms. Mix Three tablespoonfuls to be taken every six hours.

I saw her early on the following day, the 15th; she had passed a restless night; had been sick several times, ejecting bile; complained of a dragging weight in the back; the abdomen tense, but not painful on pressure; tongue moist; pulse 80; the bowels constipated, and very flatulent; uterine discharge slight. I directed the following:—Compound extract of colocynth, five grains; chloride of mercury, three grains. Mix, for pills; to be taken immediately. Compound infusion of senna, an ounce; sulphate of magnesia, three drachms; manna, two drachms; tincture of senna, a drachm; compound spirit of ammonia, twenty drops. Mix, for a draught, four hours after the pills. Effervescing draughts occasionally.

The same evening the husband called on me, stating that the medicine had not acted, the draught being rejected immediately after having been taken. At this period I felt some concern about the case, and having furnished him with another draught of the same character, requested that, if necessary, I might be sent for in the night, or early next morning.

Not hearing the ensuing day (the 16th) I concluded the patient was better. In the course of the day I called on her, and, as I anticipated, found her improving: the bowels had acted freely; the flatulent state of the stomach was much relieved; the sickness abated; and in every respect she was progressing satisfactorily. I directed her to discontinue the effervescing medicine, as it felt cold on the stomach; and after a proper interval I recommended another dose of the compound extract of colocynth and calomel, followed in a few hours by an aperient draught.

On the afternoon of the 17th I saw the patient again: the medicine had acted well; every uneasy sensation before described had moderated; she felt persuaded that the aperient plan had benefited her, and was sure, from having felt bilious a long time, that it was necessary.

She entered into conversation of an ordinary kind, and was very cheerful, a good night being all she required in her own opinion to restore her to her usual health. She continued in this state up to ten, P.M. About eleven o'clock the same evening my immediate attendance was requested; the patient having, as it was stated, changed suddenly for the worse. With as much expedition as possible I hastened to the case, and on arriving my astonishment was as great as my anxiety. With a small, quick pulse, perfectly bloodless countenance, extreme restlessness, constant sickness, a bursting sensation in the abdomen, hands and feet perfectly cold,—I could but silently agree with her often-repeated exclamation, that she must die. Stimulants internally, warmth externally, and the rapid employment of every available measure calculated to rouse and support the sinking powers, gave us a hope for a short time that she would rally; but at the expiration of an hour or two, with a quick movement she turned on her left side, and immediately expired.

Those who, in common with myself, are entrusted with the lives of their fellow-creatures, can well understand the regret felt at the loss of a patient under circumstances so unexpected.

With a pardonable anxiety to have the mystery by which the case was enshrouded, cleared up, and to restore confidence in my own judgment, as well as to

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lighten the responsibility which the public attach to the office filled by those in whose hands the issues of life and death are presumed to be placed, I asked for a post-mortem examination; the husband readily consented to my wish.

Before instituting an inquiry, I ventured to express to the friends my belief that some important organ within the abdomen had suddenly given way, as the symptoms immediately preceding death resembled those that are witnessed in rupture of the hollow viscera.

Post-mortem examination eighteen hours after death.—The body appeared perfectly exsanguine; on making a perpendicular section of the abdominal parietes, a large quantity of fluid blood escaped. To render the investigation easier, a transverse section was required. Before proceeding farther, it was clear that death was owing to internal hæmorrhage; the escape of fluid blood over the sides of the incisions was immense.

The precise seat of lesion was the next point to determine. After removing a large quantity of blood partly coagulated, I could recognise the different organs within the pelvis.

The uterus was somewhat larger than in the unimpregnated state; the bladder empty; the right ovary, with the Fallopian tube and fimbriated extremity, healthy, and in their natural situation. On the left side, about two inches from the ovary, I discovered an enlargement about the size of an orange, which at first looked like a firm coagulum, but by washing it carefully it soon became evident that it was an organized body, and on closer inspection the peculiar structure of the placenta was apparent. The ovum I could not discover; it was no doubt lost in the enormous quantity of blood effused after the rupture of the Fallopian tube. The vagina had a covering of dark blood, and the uterus itself, at the fundus, was coated with a tenacious fluid, which could easily be wiped off.

No practical advantage may follow the record of this case; to myself, however, the utmost satisfaction arose from the inquiry, as it must be acknowledged that by no foresight could such a result have been anticipated, whilst no treatment from the commencement could have prevented such a termination.

ON A CASE OF PLACENTA PRÆVIA.

By Sidney Henson, L.A.C., & M.R.C.S. Lond.

The following particulars of a case of placenta prævia, with presentation of the hand, in which the hand of the accoucheur was passed through the placenta, and the child turned, the mother recovering, may be considered worthy of insertion in the Lancet.

The patient, who is about five-and-thirty years of age, and a strong, healthy woman, was seized with labour on Saturday, the 12th ult. It was her 10th pregnancy. On my arrival, I immediately made a vaginal examination, and found the membranes protruding, and the os uteri very dilatable. Not being able to satisfy myself as to the presentation, I was going to make a second examination a few minutes afterwards, when the membranes ruptured, an unusually large quantity of liquor amnii escaping. On making my second examination, I found that the placenta was situated almost immediately over the os uteri. I then inquired if there had been any hæmorrhage previously during pregnancy, but she distinctly assured me there had not been, which rather puzzled me, though I was quite certain that it was the placental mass which I felt presenting.

For a short time there was a good deal of hæmorrhage during the intervals between the pains, and I was about proceeding either to detach the placenta, or pass my hand through it, and endeavour to turn the child (an operation which I have never yet performed,) when the pains receded, the hæmorrhage almost ceasing; there being so little that I did not think that there was occasion for immediate interference, particularly as the woman felt perfectly sure that the child was dead, not having felt it move for three or four days.

Here I would state that the case was not one of my own; but one which I was called to attend during the absence of the gentleman who was to have attended, Mr. Pettinger, of Sutton-on-Trent, a gentleman who has been in practice nearly thirty years. Feeling, however, that I should like to have some other opinion, I sent to ask Mr. Gilby, of Sutton, whom I had met at an operation a short time before, to have the goodness to ride over and see the case, which he very kindly did.

On examination, Mr. Gilby found the placenta presenting, the hæmorrhage being very slight and no pains; he agreed with me that although interference would be requisite, yet there was no immediate occasion for it.

Under these circumstances, I preferred waiting for Mr. Pettinger's return, and I afterwards congratulated myself that I did so. I thought that I could feel the hand presenting beyond the placenta, but I could not be sure.

On Mr. Pettinger's arrival, he found the patient without any uterine contractions whatever, there being very little hæmorrhage, and her pulse good. He immediately passed his hand through the placenta, when he found the hand of the fœtus presenting. He then endeavoured to turn the child, which, after great exertion, he failed to do, and was compelled to allow the uterus to expel his hand. The pains came on again almost immediately after Mr. Pettinger had passed his hand through the placenta, being very powerful ones indeed. I then attempted to turn, but after some time was compelled to allow my hand to be expelled also. I succeeded, however, in getting the hand of the child up into the uterus, but it came down again.

However, after the administration of one drachm of tincture of opium, Mr. Pettinger succeeded in getting one foot down, to which I tied a piece of tape, which I held securely. At this time, both a hand and foot protruded. The former was shortly however returned, and the other foot brought down; soon after which, the child was expelled, to the great delight of not only the mother, but my friend Mr. Pettinger and myself, as he said he had never met with such a case before. To conclude, the patient convalesced very nicely. The following day there was a little tenderness over the region of the left ovary, which, however, was relieved by a few leeches. She is now at work peeling rods, a common occupation here at this time of the year for women of the lower class. The child, I need hardly say, was dead, as it had evidently been for two or three days, but was a fine full-grown male.

INTRA-UTERINE POLYPUS SPONTANEOUSLY CAST OFF.

By Walter Chapman, Esq., M.R.C.S., Surrey.

M—— G——, aged thirty-five, a highly respectable unmarried woman, of very delicate aspect, enjoyed good health until May, 1844. The catamenia appeared when she was between fourteen and fifteen years of age, and continued regular. At the time stated, her illness commenced with more or less of leucorrhœa, loss of appetite, emaciation, and debility, the catameniæ recurring properly. Thus she continued for three years, during which she was under the care of an experienced and intelligent practitioner, without

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deriving any decided benefit. In 1847, she submitted to an internal examination, but nothing abnormal was detected. In the following year she began to perceive an augmentation of size in the hypogastric region, and to suffer severe pains, having the character of those of labour, and more particularly at the menstrual periods. In March, 1849, she consulted Dr. Lever, who made a vaginal examination, and pronounced her to have "a polypus in the womb." I first saw her in April of the same year, and found her suffering greatly, from inability to void her urine, (rendering it necessary to pass the catheter,) and from an almost constant uterine hæmorrhage, the blood sometimes gushing away, at others slowly draining; she was very much anæmiated and emaciated; there was frequent vomiting, and almost constantly great pain in the back, loins, and uterine region, these pains frequently becoming exceedingly severe, resembling those of parturition, and preventing her from obtaining either rest or sleep, except for very short periods.

On making an external abdominal examination, a large globular moveable tumour could be very distinctly felt in the hypogastrium; its size was about equal to that of the uterus directly after the completion of labour at the full period, and could quite as readily be felt; it was not very painful or tender to the touch. An internal examination discovered the vagina to be very small, and narrowed superiorly, the os uteri to be so closed as not to admit the tip of the finger, and the uterus itself moveable and large, as if from something in its cavity.

In this sad state she continued till April, 1850, with an aggravation of all her symptoms; and her death seemed quite inevitable, from their combined effects. There was no alteration in the state of the os uteri.

Dr. Lever saw her with me again about this time, and thought her only chance of safety depended upon the uterus being able to expel its contents into the vagina, so as to allow of their being removed from thence by ligature.

One morning in April, 1850, her mother (who is a very sensible woman) showed me a whitish substance, like a shred of fibrine, which had passed per vaginam; it was very tenacious, and not offensive. From this time, many of these shreds or masses continued to be expelled, some requiring to be extracted from the vagina, till a quantity escaped more than sufficient to fill a pint basin. Three months elapsed before the whole of this mass was voided; two or three days sometimes passed without any more escaping. As it came away, the tumour proportionately diminished in size, the hæmorrhage ceased, the pains gradually disappeared, and she began to obtain rest, and to recover her appetite and strength; at the end of June, 1850, she was able to walk out of doors. In about three weeks more, the catamenia again appeared naturally, and have since continued to do so, without any discharge in the intervals; and at the present time, and for so many months past, she pronounces herself to be quite well, and has the appearance of being in perfect health.

I should mention, that during the last twelve months of her sufferings, in opposition to the earnest entreaties of Dr. Lever and myself, she (thinking her recovery impossible) would not permit any vaginal plug to be used, and refused, almost entirely, to take any kind of remedy, even morphia or opium.

Dr. Lever informed me that he considered this a very rare case, there being only three or four upon record of a similar kind.

ON SULPHURIC ACID.

By Dr. Sheridan Muspratt, F.R.S.E.,
Professor of the Liverpool College of Chemistry.

It is mentioned in several of the leading works upon chemistry, that sulphuric acid, with a specific gravity of 1·78, contains 68 per cent. of anhydrous acid. I infer, from some recent experiments, that *commercial*, and not the *pure* acid is meant. Liverpool "oil of vitrol," having a specific gravity of 1·784, yields me 68·47 of dry acid; but it contains the following impurities; *hydrochloric, nitrous, nitric acids, potassa, lead, selenium, titanium, lime, magnesia, arsenic, tin, iron, copper, organic matter, &c.* No recent experiments have been made upon this subject, so that many persons have only the data of Dalton, Vauquelin, and Berthollet, to go by, arrived at many years ago.

Having been lately consulted by a manufacturer, with respect to oil of vitrol of a certain density, I investigated the subject, and found that pure sulphuric acid, at 32°, specific gravity 1·767, gave the annexed:—

Dry acid	72·97	—73·01
Water	27·03	—26·99
	100·00	100·00

Corresponding to the formula

$$2\,(H\,O\,SO_3) + aq.$$

Its boiling point was 251·5°.

When dilute sulphuric acid is boiled, only water is evolved at first, no fumes mixing with the aqueous vapour until the residue becomes $2\,H\,O\,SO_3$. This, I believe, has also been noticed by Graham.

Pure oil of vitrol, specific gravity 1·84, contains, theoretically, 81·63 per cent. of anhydrous acid. Dalton only gives 81·00. I have obtained, by experiment, 81·68 per cent.

The preceding results will, I think, prove interesting to many of the readers of this valuable journal.

OBSERVATIONS ON THE TREATMENT OF CERTAIN INTRACTABLE DISEASES OF THE SKIN, AS PURSUED IN THE PARISIAN HOSPITALS.

By James W. Begbie, M.D. Edin.

LUPUS.—(*continued from July No., p. 27.*)

My own observation of the treatment of lupus in Paris, limited as it has been to a few months, will not allow me to express an opinion in regard to the return of the disease under the treatment by cod-liver oil; but I have heard several of the Parisian physicians speak strongly on this point, and M. Devergie has frequently mentioned, that relapses are less common, and when they occur, do so at much longer intervals, than under other methods. After my own observation of the efficiency of cod-liver oil, I cannot help contrasting it most favourably with the prolonged and frequently unsuccessful treatment of the disease by mercury, arsenic and iodine. I might adduce many interesting cases, the records of which I have preserved, but have purposely selected the two following, as illustrative of the *plan* of treatment I have seen so successful. The 1st, lupus in a scrofulous subject, treated and cured by cod-liver oil. The 2nd, lupus resisting at certain points the constitutional remedy, but cured after the employment of an epispastic.

Case 1.— Early in Nov. last a woman, aged thirty-six, entered the hospital St. Louis, under the care of M. Devergie. She was from the country in the vicinity of Paris. The disease first attacked her fourteen years ago, but after continuing for some months under the influence of treatment, it healed. At various

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periods during this long interval the disease has reappeared, but after some months' continuance, and followed by the loss of a good deal of the surface attacked, it has declined. The disease originally began in a pimple at the junction of the left ala nasi and cheek; now both alæ are completely destroyed, and there exist a large number of small dark-red tubercles, situated on an inflamed base, which occupies the summit and both sides of the remainder of the nose, and the upper lip presents the same appearance. The disease returned some months ago, and has resisted remedies employed in the country. The patient is very scrofulous in appearance, and has enlargement of the cervical glands. Ordered cod-liver oil.

On the 14th December, M. Devergie drew the attention of his clinical class to the improvement effected in this case. There then existed no tubercles, the inflamed character of the sore had passed away, and the lip was nearly cicatrized. There was a small ulceration on the lower left eyelid, which M. Devergie touched with lunar caustic, because, though not lupine in appearance, such are always suspicious. Cod-liver oil continued.

On the 21st, the sore was completely healed. The patient remained a few days longer, and then left the hospital, with instructions to continue the oil.

Case 2.—A young woman came under the care of M. Devergie, in the end of November, with tubercular lupus of the left cheek and nose. The disease had first manifested itself in the same situation as in the former patient, and after some weeks a tubercle had appeared on the cheek. There existed no great destruction of parts, the ulceration of the cheek being only the size of a groat, but the appearance was threatening. The constitution evidently scrofulous.

She was ordered cod-liver oil in large doses, and after its employment for six weeks, there resulted the cicatrization of the sore, except at two points, both of these on the cheek. The skin in the neighbourhood of these had that delicate puffy appearance, familiar to all who have watched the progress of lupus. To these two spots M. Devergie, on the 4th January, applied the chloride of zinc paste in the manner already described; after a few days the parts so treated presented a perfect cicatrization.

I should mention that M. Devergie is frequently in the habit of prescribing the cod-liver oil in much larger doses than I have seen done by any other physician—in doses of three and four wineglas-fuls twice a day. The languor and indigestion, which frequently follow the dose of cod-liver oil, he further prevents by the combination with it of tonics, especially gentian.

(To be continued.)

CASE OF POISONING BY THE DATURA STRAMONIUM.

By H. Parker Laurence, Esq., Assistant-Surgeon Second Belooch Battalion.

On the evening of the 10th of February, a prisoner was brought to the General Hospital, from Bukkur Fort, in the following state:—He was quite insensible to sound, seeming not to hear the loudest talk; rousing and shaking him had no effect; his eyes were partially open, and the pupils more dilated than I have ever seen. The stupor was of a drunken kind; there was no disposition to sleep, but a constant restlessness and turning of the body, attended by a most peculiar fidgety manner of twisting the fingers and catching at some imaginary object. This was varied now and then by grasping the bed clothes very tight; his body was warm more from this exercise of the arms than any perceptible cause; the tongue was always rolling; the pulse rather quick; and the patient often shrunk, as if suffering from a creeping sensation over his body.

Nobody knows when or how he became so; but he was found in this state at two A.M. It was my belief that the man was under the influence of some vegetable poison. Accordingly, a dose of seventeen grains of sulphate of zinc was given, followed by warm drinks, and wet cloths ordered to be kept to the head. The zinc having no effect, a second dose was given, a good scruple; this likewise failed. I then used the stomach-pump, but brought nothing from the stomach. After waiting a little time, I gave fifteen grains of sulphate of copper, and directed an enema to be used, and that mustard sinapisms be placed on the nape of the neck and some way down the spine.

11.—In the same state; the emetic not acted; nor have the bowels been moved; the pulse very quick and sharp. Ordered, ipecacuanha powder, one scruple; potassio-tartrate of antimony, one grain; and an enema of sulphate of magnesia and warm water; vomited once, and brought up several seeds of the datura; the bowels unmoved. I now bled him at the arm, taking away fully ten ounces of blood; ordered another enema of oil of turpentine, castor oil, and tepid water; head to be shaved; cold applications thereto, and the emetic as before at two P.M. Evening—Still insensible; bowels unmoved; slight sickness, and more of the datura seeds.

12.—Bowels twice freely moved during the night, when several of the datura seeds came away. To get demulcent drinks only. Evening—Appears to be coming round, and takes a childish notice of signs, but unable to talk.

13.—Is disposed to be very happy; laughs and talks incessantly; bowels open. Evening—Has sobered down; quite sensible, and says, that the seeds of some plant had been given him by another man, at his own request, as medicine.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

June—July, 1851.

Dr. E. Smith related the following

FATAL CASE OF INVERSION OF THE UTERUS, WITH ATTACHED PLACENTA, OCCURRING UNDER THE MANAGEMENT OF A MIDWIFE IMMEDIATELY AFTER DELIVERY.

The subject of the accident was thirty-five years of age, of somewhat large build, and of full habit, and was apparently more sensitive than females are in general. She enjoyed a fair share of health, but was always disposed to complain, and her scrofulous temperament evinced the lack of a robust system. She was ill fitted to repel the influence of exhausting agents. She was delivered of her second child at eleven P.M. on May 5, after a labour of less than the average suffering, and of only five hours' duration. I was called to see her at a quarter past eleven P.M., and found a tumour of about ten inches in diameter, projecting from the external parts. The placenta was chiefly attached to the anterior part, but prolongations of it surrounded the whole tumour in such a manner, that a central cup-shaped concavity existed, of two inches in diameter, and three-quarters of an inch in perpendicular depth. On examination, this tumour proved to be the inverted uterus, to which the placenta was still perfectly adherent. The funis was broken into two parts; that which was attached to the placenta being about eight inches in length, and the portion which was separated being about twelve inches in length. There did not

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appear to be more hæmorrhage than is usually observed when the placenta is detached and expelled in the ordinary mode. She was quite conscious, and fully alive to all that was transpiring, and was not apparently aware of the existence of imminent danger. Yet her pulse could only be felt at intervals, and then only during two or three beats, which were not remarkably frequent. I instantly sent messengers to request the assistance of two neighbouring practitioners, and in the meantime endeavoured to return the uterus, with the placenta still attached, within the parts, as a preparatory step to the reduction of the inversion. The effort was ineffectual, and the anterior surface of the placenta becoming ruptured at one point, a considerable gush of blood followed. My medical friends arrived in over five minutes after I had first seen the case, and we determined to peel off the placenta first, and then return the uterus. The first was effected by Mr. Lucas, without any further loss of blood, and the latter was also accomplished without much difficulty. The pulse was still almost imperceptible, but the mind was collected and calm. No noises were complained of, nor were there the slightest indications of faintness or spasm. Pure brandy was administered freely, in about half-ounce doses, so frequently, that half a pint was exhibited in three hours, yet no improvement, of any but the most temporary character, was effected in the circulation. A drowsiness began to steal over the senses in about an hour after the womb was replaced, which the patient attributed, erroneously perhaps, to the effects of the brandy; but from this she could be aroused with more and more effort as the progress of the case advanced. At about one P.M., a sharper state of the countenance became evident, and this increased so much, yet without any complaint whatever, that at from two to three P.M. she had lost her own distinctive features. I frequently introduced my fingers within the patulous os uteri, and placed my hand upon the abdomen, and observed that the uterus remained tolerably contracted, and that at no time was there the slightest hæmorrhage. Finding that no benefit whatever had resulted from the administration of the brandy, I again requested the advice of Mr. Lucas at half-past two A.M., when it was determined to move the patient very carefully, but to the extent of relieving the discomfort of the position, and to administer ether. This was done, and the pulse seemed to gain in firmness and steadiness for about a quarter of an hour, but the dulness of the senses still continued. At the end of that period she suddenly appeared to become more exhausted, yet remaining somewhat conscious, and whilst endeavouring to swallow a small quantity of brandy, deglutition failed, and she sank gradully in a few minutes.

The post-mortem examination showed a healthy condition of all the organs of the chest and abdomen, but all were drained of blood. The heart and great vessels were empty. The uterus was properly replaced and empty, having no clots of blood whatever, but some slight remains of the placenta; the cavity was about five inches in the transverse, and eight inches in the longitudinal diameter; the tissue of the uterus was loose and flabby, and the walls at the fundus were fully half an inch in thickness. At the inquest I gave as my opinion of the cause of death, that the patient had died from the shock upon the nervous system, induced partly by the loss of blood and partly by the violent inversion of the uterus.

The points of interest in this case appear to me to be the following:—1stly. A confirmation of the ordinary position of the placenta. 2ndly. The fact that a bloodless condition of the whole system was induced by an amount of hæmorrhage which did not appear to any person present to be considerable, and without any other symptom than pulselessness. The drowsiness which was eventually induced, might at least, in some degree, be attributed to the alcohol. At any rate, this and the sharpened features more readily pointed to the nervous than to the circulating systems. 3rdly. Considering that the symptoms were rather those indicating a shock than exhaustion from hæmorrhage, would it have been prudent to have so far suspended the administration of the brandy as to administer ammonia, ether, or other nervous stimulants? 4thly. Dr. Denman and Dr. Burns advise that the uterus, with the attached placenta, be returned. Dr. Merriman also gives the like counsel, but he mentions an instance in which he first detached the placenta, and the patient did well. It is highly important that some definite rule should be laid down by the profession; for if it be judged best to detach the placenta, it will be injurious to lose time in endeavouring to return it; if it be deemed proper to return the mass, it cannot be right to run the risk of alarming hæmorrhage by first detaching the placenta. 5thly. What direct evidence can be adduced to show the guilty interference on the part of the midwife? Cases are recorded of inversion of the uterus having occurred from the mere dead weight of the attached placenta; also from distention of the alimentary canal, or of some sudden action of the abdominal muscles, and therefore blame does not, of necessity, attach to the attendant. It is true, that until the placenta is detached, the hand ought not to be for a long time apart from the womb, and in cases where inversion has thus occurred, it has not been so complete as in this case; but yet the admission of the possibility of such an occurrence renders it imperative that direct evidence of a guilty interference or neglect should be established.

The evidences in the case are—1. The admission of the midwife that she attempted to remove the placenta within a quarter of an hour after delivery. 2. A further admission that she did use some force, but that it was to a very slight extent. 3. The rupture of the funis. 4. The persistence of the uterine contraction after the uterus had been returned, and when that organ was almost bloodless and the system exhausted, is *primâ facie* evidence that the inversion had not resulted from the absence of contraction. Still the link was wanting to show that the midwife had used improper force, and thus she escaped punishment. 5. Was transfusion indicated in this case?

FIBRINOUS DISEASE OF THE PLACENTA.

Dr. Ogier Ward exhibited a placenta from a patient aged thirty-nine. It was her eighth confinement, premature, between the sixth and seventh month. The feet which presented being cold and livid, as soon as they were extracted from the vagina, Dr. Ogier Ward tickled the soles, and by their retraction having ascertained the fœtus to be still alive, proceeded with the delivery. The child, a female, only gave signs of life by slight beating of the heart, not sufficient to propel the blood through the cord, which was left untied to relieve the congestion, which showed itself in the general lividity of the body. By inflating the lungs, and the other ordinary means, in about two hours respiration was established, but the heat of the infant could only be maintained by wrapping it in cotton wadding, and laying it close to the fire. It weighed two pounds one ounce, and lived eighteen hours. The mother had suffered very much during her pregnancy from vomiting. The placenta, being adherent, was removed with some difficulty. It was very small, with many nodules of lymph on its maternal surface, in amount and extent greater than the healthy structure. The fœtal surface was studded with semi-transparent tubercles along a portion of its edge. The cord was

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very thin, and only thirteen inches long; the capillaries of the condensed portions were filled with and surrounded by an opaque substance, which, upon drying, became white, resembling closely the ordinary appearance of ossific deposit, but without its rigidity; in the moist state, very few oil globules were seen in the fluid that flowed from the nodules. Dr. Ogier Ward remarked that these deposits of lymph and ossific matter were extremely common,—in fact, occurred in the majority of placentæ at the full period, and, according to his observations hitherto made, more frequently among the very poor.

Dr. Barnes, after speaking of the importance of the pathology of the placenta, said that ossification of it was not a disease of importance, unless the formation was very rapid. Ossific matter was often found in granules investing the vessels of the placenta, but it usually left so much of the placenta unaffected as not to interfere with its nutrition. Not so, however, was the case with respect to fatty degeneration. In this disease, the larger portion of the capillaries on the umbilical surfaces was so much obstructed by fat, that the circulation could not properly go on, the child was not nourished, and abortion might be the result. Fibrinous deposit in the placenta might be attended with ill consequences.

Mr. E. Canton inquired whether Dr. Barnes spoke of fatty deposit, or degeneration, as he considered there was great difference between the two conditions.

Dr. Barnes had used the term degeneration. He did not recognise the distinction made by Mr. Canton. The conditions mentioned, he (Dr. Barnes) believed, were, in reality, the same disease in different stages of development.

RAMOLLISSEMENT OF THE BRAIN.

Mr. Barlow drew the attention of the society to some points connected with ramollissement of the brain. He related the case of a man who was admitted into the Westminster Hospital under the care of Dr. H. Roe, with a well-marked case of this affection. The man was made a patient in the hospital on November 13th, 1848. He had a heavy expression, and complained of pain in the head, which was sometimes worse than at others; also of giddiness, and a difficulty of moving the right hand and fingers. His handwriting was like that of a patient with chorea, and occasionally he let things drop. His memory was defective, and soon began obviously to fail, and the processes of his reasoning faculties were altogether impaired. After five days, during which the symptoms progressed somewhat, he changed abruptly for the worse, and lay in a state of stupor. This was not uniform, and he could, at times, be aroused to passing consciousness. There was complete paralysis of the right side, the leg whereof could be readily excited to reflex actions. He began to swallow, and also to breathe, with difficulty; but, occasionally, the swallowing and breathing seemed unembarrassed. The vacillation of the symptoms formed one of the most interesting features of the case. Now there was consciousness; now almost absolute loss of it. Any one who might have watched him superficially, or have judged of his condition by a single visit, would have been deceived respecting it. On the 22nd he could not be roused so as to know anything, and both swallowed and breathed with considerable difficulty. His paralyzed side was lax, and never affected by any spasms save those caused reflexly; the opposite was almost continually agitated by aimless, restless acts of volition. The patient lingered until the 26th, and died in deep coma. On examination, there was found considerable opacity of the arachnoid, the vessels of which were more turgid and crowded than usual. But the main thing was a most marked and extensive softening of almost the entire left cerebral lobe. Small dots of blood were effused here and there throughout the softened brain. Some spots were of a pink or red hue; a yellow or yellowish tinge was seen nowhere. The inner portion of the brain was much more affected than the outer. The softening was extremely extensive and well marked. The author then remarked upon general and partial ramollissement; the former was often a post-mortem change, the latter was far more to be relied upon as the consequence of disease. The disease which produced the softened state should not merely be contemplated in its utmost ravages, but (so far as possible) at that early time when, so far from interfering with the vital, it had just begun to influence the intellectual functions. The author then proceeded to comment on some symptoms of the case—the pain, the vertigo, the imperfection of motion, the paralysis, the reflex action, the difficult breathing and deglutition; the variability of important signs; the state of the mind throughout considered, and so forth; and dwelt, at length, on the absence of rigidity, a matter upon which M. Lallemand had laid infinitely too much stress in the diagnosis of ramollissement. Whether or no much pain would attend this affection would depend on the acuteness, violence, and extent of inflammation, and on the age and temperament of the patient; slight and very gradual inflammatory action would produce but little; and the coma which attended the affection would, of course, altogether preclude it. In those cases where the parts died, as it were, not violently, but lost their coherence from the effect of atrophy, pain was not to be expected as in those instances where the inflammatory action strongly raged. It was to be considered, too, in reference to the increase of sensibility, whether the ramollissement was pure and uncomplicated, or combined with other affections—arachnitis, for instance. The pain of the disease should also be compared with that which happened under various circumstances; it was by contrasting symptoms that we found out their nature. The subject of vertigo was one of great moment in reference to cerebral affections in general; it was well marked in the present case: now it happened from cerebral anæmia, now from dangerous fulness, and might be a threatening of apoplexy; now it was a mere sign of functional, now a most clear and alarming evidence of organic disease. It was one of the best marked and most constant symptoms in the instance of an enormous aneurism at the base of the brain, which had been laid before the Pathological Society very recently by Dr. Roe. The way in which volition was affected in the case detailed, was extremely well worthy of remark. By watching this function, the true state of the mind might almost be arrived at, and the progress of the case estimated aright. What very different features did it present at the beginning, the middle course, and the end of the disease! As it became more influenced, there was an increase of the weakness of mind, whilst with the confirmed hemiplegia came a state of all but perfect annihilation of the cerebral functions, and danger most imminent. The variation in the symptoms towards the close of the case was one of the most remarkable features; life did not ebb gradually away; there were from time to time partial recoveries. The same thing was to be noted in various head affections; the sensation, the will, even the vital functions, most strangely differed during their course. But this led to the mention of that striking and complete recovery of consciousness which sometimes happened to the profoundly comatose just before they died. How was it to be explained? Was it that from some change in the cerebral circulation the compression of the brain became less for a while? The author then referred to the extreme difficulty of accurately investigating the condi-

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tion of the faculties in cerebral affections, and to the unsatisfactory statements made by writers of their being unimpaired in some instances, wherein clearly they had examined them (if such a word could be used) most inadequately and superficially. The same remarks applied to the special senses, and the mode wherein they were occasionally observed. But in all inquiries of this nature, how much depended on the patient himself! He might trace accurately the changes which had come over him, and so paint them, that the medical historian, in order to be graphic, had simply to transfer the narrative to his paper. The absence of rigidity or contraction of the limbs in the example before them, was well worth noticing, because of the stress which had been laid by some writers on that form of muscular action as a sign of ramollissement. It was anything but a proof of that process: although the frequency wherewith it happened in instances of of that affection made its consideration, in reference to the diagnosis of it, very important. Taken in reference to cerebral diseases in general, it was of great consequence to observe it well. It might arise—1st, From physical irritation of the spinal core; 2ndly, From the influence of emotion, as might be ascertained by carefully examining the body under various states. 3rdly, From an affection of the muscles themselves, being the manifestation, probably, of unexhausted irritability. Observations of Dr. M. Hall and M. Flourens were cited, to illustrate some points of great interest in relation to tonic muscular action. The author lastly referred to the subject of fatty degeneration in its relation to ramollissement and apoplexy. A case had been admitted into the Westminister Hospital, under the care of Dr. Kingston, of a man aged forty-one, who died of an immense sanguineous effusion, which chiefly occupied the left ventricle of the brain and contiguous cerebral substance. At Mr. Barlow's request, the smaller vessels of the softened substance had been examined microscopically by Dr. C. Sheerman, who found them in that state of fatty degeneration which Mr. Paget had not long ago described and figured in the *Medical Gazette*. The degeneration of vessels of this minute size was of every consequence; there could hardly be a doubt that it led both to ramollissement and apoplectic effusion. After referring to some observations of Dr. Williams and Dr. Quain, who had confirmed the views of Mr. Canton in reference to the frequent co-existence of the arcus senilis (in itself a most innocent form of fatty degeneration) and the fatty change of the heart, the author expressed his conviction, that the arcus would be found eventually of great value in attempting the true inference from such symptoms as indicated ramollissement, or threatened apoplexy; and concluded his observations by directing attention to conditions of the mind, as being in various instances more or less intimately related to the production of cerebral disease.

Dr. Crisp considered that a greater bugbear did not exist in pathology than that which had been called fatty degeneration. Instead of regarding it as a disease, he (Dr. Crisp) looked upon the formation of fat as a salutary provision of nature for greasing the rusty machine. Why did he think so? Fatty deposit was universal. It might be found, doubtless, in some cases of apoplexy, as mentioned by the author of the paper; but it did not follow that fatty deposit and apoplexy existed in the relation of cause and effect. Such a condition might only occasionally exist. After speaking of the changes which the arterial system undergoes in old age, and mentioning that Monro had long since called the middle coat of arteries the fatty coat, he spoke of the difficulty which existed respecting the diagnosis of cases of ramollissement of the brain. The cases of this disease presented such varied and varying symptoms, that it was impossible to draw conclusions from them. He mentioned a case of softening of the cerebellum, in which the motive power remained unaffected, and a case of softening of the cerebrum, in which such loss accompanied the disease.

Dr. Barnes regretted that the author of the paper had not drawn attention to one point in the diagnosis between softening and apoplexy, which had been mentioned by Rostin. That pathologist considered one striking point of difference in these diseases consisted in the circumstance of ramollissement being slow, whilst apoplexy was rapid, in its progress. Dr. Barnes then spoke of the importance of the views advanced respecting fatty degeneration, and said that any change in the minute capillaries, whether produced by fat or otherwise, interfered more with the nutrition of the part than if the larger vessels were the seat of the disease. He differed with Dr. Crisp in his opinion.

Dr. Crisp explained that he had confined his remarks to the fatty degeneration of old age.

Dr. Camp agreed with Dr. Barnes respecting the importance of our knowledge of fatty degeneration; but he could not go so far as the author of the paper in regarding this condition as productive of ramollissement and apoplexy. He thought we were wrong in drawing hasty conclusions in this matter. Dr. Crisp had confounded fatty deposit with fatty degeneration, which were different conditions altogether. He regretted that the paper had not gone deeper into some points connected with apoplexy and ramollissement, and mentioned that the diagnosis between these diseases had been barely hinted at even by the prize essayist of the Academie de Médecine, who had quoted sixty works on the subject in his paper. With respect to treatment, little could be done in the case mentioned to the society, which had advanced to a hopeless stage when it first came under Mr. Barton's care. The disease had, he believed, been going on for a long time before the patient was admitted into the hospital.

Dr. Chowne, after speaking of the great difficulty of diagnosing between apoplexy and softening, commented on the vagueness of some of our new terms in pathology. He then alluded to the influence which civilization and its attendant consequences had upon the mental condition. He had watched many cases of ramollissement with great care, but he had never been able to detect any sign which would determine that from some other disease of the brain. The disease was most peculiar in many respects; and he mentioned a case which used to be narrated by the late Dr. J. Johnson, in which a merchant transacted business up to four days from his death, without a symptom of brain disease; yet after death both anterior lobes of the brain were found to be in a state of complete ramollissement. After showing from cases that the symptomatology of the disease was very illusive, he mentioned some instances, which he characterized as a sort of "hysterical apoplexy," in which the symptoms presented were similar to those observed in cases of organic disease of the brain, but which were removed by little or no treatment, the patients recovering entirely.

Mr. Canton said that in some cases in which the brain was remarkably soft, he had found more than usual ossific deposit in the vessels at the base of the brain. In cases where the mind was imbecile, he had found fatty degeneration of the brain to exist. The great difficulty in these cases was to determine the relation which existed between the appearances and the symptoms. As a general rule, however, as the brain was found more softened, the arteries would be found more ossified; so, the more complete the integrity of the substance of the brain, the more healthy the vascular structure. Mr. Canton then enlarged on the importance of our knowledge of fatty degeneration

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of organs, and alluded to the labours of various pathologists in this department.

Mr. Barlow, in reply, spoke of the great difficulty which existed in respect to the diagnosis of ramollissement; and, in respect to fatty degeneration, was astonished to learn from Mr. Crisp that it was a conservative process.

Dr. Webster read a paper

ON THE HEALTH OF LONDON DURING THE SIX MONTHS TERMINATING MARCH 29, 1851.

After alluding to previous communications respecting the sanitary condition of London, made to the society, the author said, speaking generally, the health of the metropolis had recently proved of a more favourable character than during the six parrallel months of the former year,—especially in last October, November, and December, when 12,544 deaths were reported, instead of 12,877, which occurred in the same quarter of 1849,—thus making a difference of 333 fatal cases in favour of the first three months of the half-year just terminated. With reference, however, to the amount of sickness, and consequent mortality met with, throughout the metropolitan districts, in the latter quarter—viz., the first three months of the current year—the result was somewhat different, seeing 15,410 persons then died in London, contradistinguished to 13,219, reported during the parallel quarter of 1850. This excess in the number of fatal cases, the author specially remarked, occurred chiefly in the month of March, when not less than 1443 more deaths took place than in the similar four weeks of 1850; which consequently became, in comparison with any other period, an unusually insalubrious season. Pursuing the same plan adopted, when adverting, in former papers, to the sanitary condition of London, Dr. Webster, at considerable length, then discussed the several diseases which lately exhibited a diminished rate of mortality, the principal being cholera, only 70 deaths having recently occurred by that epidemic, instead of 502, during the similar six months of the former season; by diarrhœa, 539 deaths, instead of 689; and by dysentery, 71, in place of 122; whilst measles, scarlatina, apoplexy, paralysis, erysipelas, and two or three other maladies, likewise came within this category. The author next adverted to the complaints which had recently shown an increased rate of mortality. Amongst these, bronchitis occupied a prominent place, seeing 2534 individuals died from that affection during the last six months, instead of 2089 throughout the parallel two quarters of the previous year. Pneumonia gave 2190 instances, instead of 2000. Asthma proved fatal to 599 persons, in place of 474, the previous period; influenza, to 231, instead of 87; whilst small-pox carried off 466 patients, contrasted with 194 the former season. Hepatitis, rheumatism, convulsions, and typhus, also manifested similar features, especially the latter disease, by which 1140 deaths were reported, against 962 in the former half-year. The loss of human life by violence was likewise more considerable than previously, 833 individuals having recently become victims to such casualties, instead of 727 during the six months ending in March, 1850,—thereby making an increase of one-seventh. The diseases exhibiting nearly a uniform mortality afterwards occupied the author's attention, when he remarked, that dropsy proved recently fatal to 414 patients, in place of 419; hæmorrhage, to 103, against 106; enteritis, to 178, instead of 170; peritonitis, to 102, instead of 104; and from phthisis—always a fatal malady in this country—3247 persons perished, instead of 3099: whilst by cancer the number of deaths were identical, 455 having been recorded, both during the late and previous parallel half-year. Respecting the age of parties who recently died in the metropolis, Dr. Webster subsequently said a very large proportion were young people, just entering on the morning of their existence. Thus, of the total 27,954 deaths registered during the last six months, 12,345, or 44·19 per cent., were under 15 years of age; 9227, or 33 per cent., from that to 60; whilst 6252, or 22·36 per cent., were upwards of 60 years old at the period of death; thereby leaving 130 persons whose exact age was not registered. Afterwards, the mortality recently recorded in the eleemosynary institutions of London was adverted to by the author, when he gave various details by way of general illustrations. For instance, he mentioned that almost one-sixth of the gross mortality, or 4451 persons, actually died in the workhouses, asylums, prisons, and hospitals of the metropolis, during the two quarters ending last March; of whom the majority were males, the number of that sex being 2487, and the remaining 1964 of the opposite; hence giving one-fourth more fatal cases amongst the former class than female residents. In the metropolitan workhouses, 2564 deaths were recorded; in the lunatic asylums the mortality amounted to 221; whilst in all the prisons, containing about 6120 inmates, only 27 persons died during the last six months; and as 11 of the above deaths took place in the Millbank Penitentiary, most metropolitan gaols have consequently proved healthy localities throughout the entire season. Lying-in hospitals were afterwards mentioned, in which establishments, four in number, only 14 deaths were recorded, of whom 7 were children; thereby indicating satisfactorily that no puerperal epidemic malady had recently prevailed in any of the above institutions. The hospitals for special diseases then occupied the author's attention, the first he noticed being the Lock; but as no death occurred during the last six months in this charity, the Hospital for Consumption and Diseases of the Chest then became the subject of inquiry. At the latter institution, the deaths, during the recent six months, amounted to 33, of whom 23 were male and 11 female patients; which fact is more worthy of notice, seeing the number of inmates who died in this hospital during the previous two quarters was identical with the amount now recorded. The Small-Pox Hospital next came under review, in which 46 patients died during the last six months, whilst of the persons admitted, about two-thirds were attacked by variola after cow-pox; hence showing the number of individuals actually unprotected, although many had considered themselves previously vaccinated. The only other special charity to which the author directed the society's attention was the Fever Hospital, wherein the deaths recorded throughout the last two quarters amounted to 42, of whom 19 were female and 23 male patients. This number was, however, under that met with during the previous half-year, when 50 inmates died, consisting of 26 males and 24 females; thus showing that the deaths amongst the male sex predominated during both periods. Dr. Webster then investigated at some length, in the latter part of his communication, the mortality recorded at the general hospitals of London. In discussing the chief points connected with this important question, various statistical statements, obtained from different metropolitan institutions, were brought before the society, to which the special attention of fellows was requested, as the facts detailed not only enabled scientific observers to form their own opinions from authentic sources, irrespectively of any deductions then promulgated, but would likewise prove valuable both to physicians and surgeons interested in similar inquiries. Considerable attention having been excited by previous remarks on hospital mortality, the author then observed that, in order to ensure accuracy, he purposely forwarded to professional official friends attached to the eleven gene-

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ral hospitals of London, an exactly similar form, to be filled up with the number of patients admitted, the amount of cures, and the total deaths recorded, during the six months comprised in his communication. To those gentlemen who responded, many thanks were expressed for their courtesy; and although some of the questions put could not be fully answered, owing to various causes, nevertheless the information so obtained was most valuable, as it enabled Dr. Webster to construct the subjoined table, besides supplying other data of great practical importance.

STATISTICS *of In-patients at Nine General Hospitals of London, during Six Months terminating the end of March* 1851.

Hospital.	Class of Patients	Admitt'd	Died.	
		Total.	Total.	Per ct.
St. Bartholomew's	Medical	891	121	13·58
	Surgical	1796	90	5·01
	Total	2687	211	7.10
St. Thomas's	Medical	913	92	10·07
	Surgical	1224	50	4·08
	Total	2137	142	6·64
London	Medical	528	63	11·93
	Surgical	1362	63	4·62
	Total	1890	126	6·66
St. George's	Medical	691	82	11·87
	Surgical	785	45	5·73
	Total	1476	127	8·60
Middlesex	Medical	627	51	8·13
	Surgical	640	26	4·06
	Total	1267	77	6·07
Westminster	Medical	458	40	8·73
	Surgical	318	11	3·45
	Total	776	51	6·57
Charing-cross	Medical	179	26	14·52
	Surgical	443	16	3·61
	Total	622	42	6·75
Royal Free	Medical	95	7	7·05
	Surgical	219	8	3·66
	Total	314	15	4·77
King's College ...	Both classes.	659	59	8·96
Grand totals in all the nine hospitals		11,838	850	7·18

According to this table, the number of patients labouring under surgical diseases in most of the hospitals, but especially at the London and St Bartholomew's, considerably predominated over the medical, excepting at the Westminster. In the first-named charity, the proportion was five surgical to two medical cases admitted; whilst at St. Bartholomew's it ranged exactly double. Respecting the proportion of deaths recorded, speaking relatively, the ratio was higher amongst medical patients, at all the metropolitan hospitals, than in persons treated by the surgeons; and notwithstanding the amount of deaths was identical in both categories, at the London the comparative result was similar to that elsewhere observed. On the other hand, in reference to the ordinary rate of mortality met with in medical diseases, the mean averaged highest at Charing-cross and St. Bartholomew's hospitals, where, calculated upon the numbers admitted, it reached fourteen and a half per cent. in the former, and thirteen and a half in the latter; the lowest anywhere recorded being at the Free Hospital. Again, amongst surgical patients, the smallest mortality occurred at the Westminster, in which establishment the proportion averaged under three and a half per cent.; whilst at St. Bartholomew's, five deaths occurred for every hundred admissions; and at St. George's Hospital the ratio approached to nearly five and three-quarters. No answer having been returned to Dr. Webster's application respecting the movement of patients at University College, or Guy's hospitals, the author regretted much at being unable to enter either of those institutions in the table he had compiled. Nevertheless, according to the Registrar-General's Reports, 70 patients died in University College Hospital during the two quarters ending last March, instead of 78 in the previous half-year; and at Guy's, the total deaths were 191 in the recent period, contradistinguished to 164 in the former, thus making an increase of 27 fatal cases, or nearly one-seventh. Although it was impossible to procure the requisite return regarding Guy's Hospital, a friend of the author, who obligingly examined the registers, stated, that the medical and surgical cases admitted from March, 1850, to March, 1851, amounted to 4165, the deaths being 349 during the same twelve months; hence showing that the rate of mortality ranged within a fraction of nine per cent., or amongst the highest now recorded. Notwithstanding some discrepancies appeared in the mortuary details, and other particulars, received from several hospitals, in the period Dr. Webster's report embraced, the total deaths during the more recent six months exceeded the amount recorded in the two quarters from March to October, 1850, seeing the aggregate mortality, at the eleven general hospitals, was 1051; whereas, throughout the half-year terminating on the 29th of March, in the current year, the total number amounted to 1111; thus making an augmentation of sixty fatal cases during the more recent period. However, were the first three months of 1851 only taken into account, the relative mortality in all the general hospitals was greater than in the previous quarter, as shown by the fact, that 604 deaths, or more than half the whole amount, took place during the months of January, February, and March, contradistinguished to 307 reported in the quarter immediately preceding. Besides this statement, and in proof of the augmented sickness more recently prevalent in London, compared with the same period ending in March, 1850, it should be remembered, that 583 deaths had then supervened in the eleven general hospitals, giving consequently a somewhat similar result to that lately observed amongst workhouse inmates. Thinking one or two general observations regarding the sex of patients treated in metropolitan hospitals might prove interesting, the author next remarked, that from six of these institutions, amongst the total 7706 persons admitted during the last six months, a large majority were males, 4572 being of that sex, and 3184 of the opposite; therefore making a difference of 1388 more male than female inmates, or an excess of 43·59 per cent. In two charities the reverse was noticed regarding medical patients—namely, at St. Thomas's and the Middlesex Hospitals. In the former, one-fourth more females than males, labouring under medical diseases,

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were admitted, whilst a similar peculiarity occurred in the latter institution, although the difference was less considerable. However, in the other establishments, more surgical male patients were received than females, particularly into the London and St. George's Hospitals, where the number of surgical patients of the male sex was about double that of females, at both places. Again, with reference to the aggregate mortality recorded in the same six charities, the rate, speaking generally, was rather against females, in whom it averaged nearly seven per cent.; whereas, amongst male patients, the mean ranged about six and three-quarters. Reasoning from the numerous and varied facts he had obtained, the author thought practitioners might fairly assume that the prospect of a fatal termination in male and female patients, when labouring under medical diseases of an ordinary kind, would prove nearly equal; whilst surgical complaints were likely to be more dangerous in the former than the latter sex. But these conclusions being only based upon a limited number of data, they must be therefore received as mere approximations to the truth, and as indicating to students the practical knowledge investigators would assuredly obtain, could a more extensive series of facts and figures be brought into calculation. Indeed, Dr. Webster said, emphatically, if accurate yet detailed registers of agenda in all public hospitals, kept upon a uniform system, were made available to the profession, the benefits which must thereby accrue would prove invaluable; since the medical attendant in private practice, having such guides to form his opinion, instead of being perhaps sometimes in doubt respecting the result likely to supervene in particulur diseases, might then foretell future events, with the same certainty as actuaries and physicians, conversant in the science of life assurance, are now able to prognosticate the probable age an individual submitted to their examination may expect to attain under ordinary circumstances. Feeling desirous to obtain information regarding the proportion of patients discharged cured from general hospitals, one of the questions put to the authorities of these institutions, in Dr. Webster's schedules, specially referred to that subject. Owing, however, to the difficulty of discriminating *absolute cures* from those cases which left the wards with a fair prospect of future convalescence, it became difficult, if not impossible, to discuss this important point in a satisfactory manner. Nevertheless, according to the valuable returns obtained from several charities, the author considered himself justified in saying, that more sick inmates were cured in the larger than less extensive establishments; in reference to the total admissions, that surgical patients oftener recovered than medical; that females treated in the medical division became convalescent in a greater proportion than males belonging to the same department; and further, that surgical patients of the male sex recovered from their various maladies in smaller numbers than female inmates similarly circumstanced. Having in the present paper, as elsewhere, alluded to the comparative mortality met with in the different general hospitals of London, before concluding his communication Dr. Webster begged permission to quote the last weekly report of the Registrar-General, only issued a few days ago, as the figures it contained confirmed various conclusions he had advanced, when discussing the important subject of hospital statistics. For instance, from that official document, it appeared, during the year 1850, that—1st. The highest rate of mortality was generally recorded in the smallest hospitals. 2nd. The lowest usually in the more populous institutions. 3rd. The fewest deaths, in reference to the admissions, were at St. Thomas's and Charing-cross Hospitals. 4th. The largest comparative mortality having, on the other hand, occurred at King's and University College Hospitals; seeing, in the former charity, it amounted to 10·11 per cent., and in the latter to 11·32; whereas, St. Bartholomew's gave 6·69, and St. Thomas's Hospital, 6·44 per hundred cases. 5th. The number of sick inmates, at one time, averaged 2736 in the eleven general hospitals. 6th. The aggregate deaths, during the entire year, amounted to 2200 in all the eleven charities. 7th. The fatal cases, in reference to the number of beds assumed to be continually occupied by patients, were most numerous at University and King's College Hospitals, but smallest at St. Thomas's; the ratio being 118·52 at University College, 125·71 at King's, and 61·75 at St. Thomas's Hospital, or only half the previous amount. 8th, and lastly. By the same authority it was ascertained that the number of patients reported cured, or otherwise discharged, including deaths, comprised 29,161 persons altogether, thereby showing that one in every seventy-seven inhabitants of the metropolis of Great Britain had become an inmate of the above charitable institutions, through disease, or when suffering from the effects of accidents. This fact consequently indicated, not only the important advantages thereby conferred upon the poor and labouring classes of the community resident in London, but likewise the valuable aid they so often gratuitously received, during illness, from even the most eminent and experienced members of the medical profession.

In the discussion which ensued, several speakers took part. It was admitted on all sides that the facts brought forward by Dr. Webster were highly interesting, and that the profession and the public were deeply indebted to him for his labours in respect to hospital statistics. Of course, from the very imperfect nature of the information which Dr. Webster had obtained from some of the hospital authorities, the statistics, in many respects, did not convey the full amount of information desirable to be realized from such a source. Looking, however, at the materials supplied to him, it was a matter of wonder that Dr. Webster had succeeded so well. When a better system regarding the reports from hospitals is adopted, the deficiencies pointed out by various fellows will be filled up. The labours of Dr. Webster have already, as stated by one speaker, given an impetus in the right direction. Dr. Webster's paper, of which we have given a full and elaborate abstract, will speak for itself.

SWALLOWING COPPER COINS.

Dr. Webster related the case of a girl five years old, who swallowed a copper token, the size of a farthing, which remained nearly two days in the alimentary canal without producing any serious consequences. In this patient, the accident not having been discovered till upwards of eight hours had elapsed, it seemed injudicious, in Dr. Webster's opinion, to give an emetic of ipecacuanha, which he at first thought of, in order to produce vomiting, and thereby eject the foreign body. Thinking the coin might have by that time passed through the pylorus, aloes and rhubarb were therefore prescribed, followed by castor-oil; strict injunctions being given, at the same time, to avoid everything acid, whilst bland and liquid food only was permitted. Although free purging was produced, no beneficial effect followed; whereupon, several doses of senna and salts were ordered, and the same regimen continued. By this treatment, at the end of forty-four hours, the piece of copper then shown to the fellows was fortunately expelled from the rectum, without having produced any untoward symptom, when the patient soon became convalescent. Notwithstanding there was nothing very remarkable in the case brought under the

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society's notice, still, having terminated favourably, Dr. Webster thought it of sufficient interest to merit record, especially as similar accidents occasionally occurred having a fatal termination. Besides different authors, to whom reference could be made, if necessary, in support of the above opinion, the last weekly report of the Registrar General was mentioned, seeing a somewhat analagous instance had been met with at Crown-square, Camberwell, which proved fatal. The subject was a labourer's daughter, aged three years, "who died of mortification of the bowels by metallic poison, from swallowing a farthing accidentally." The result recorded in this case not only indicated the danger produced by copper when swallowed, but made the narrow escape of the other juvenile patient more gratifying.

Dr. Ogier Ward related a case in which a copper coin had been retained in the œsophagus of a child for eight months. The chief symptom was a profuse flow of the saliva. When extracted, the coin was so much corroded as to be scarcely distinguishable as a half-penny. In another case which he had seen, a copper half-penny had been retained in the œsophagus for four days: there was here also a profuse flow of saliva, but the coin was not corroded when extracted.

Mr. Dendy had met with very many cases in his public practice in which copper coins has been swallowed by children. The result of his experience was that they did no harm, nor did he see that we had reason to expect that they would.

Dr. Tilt read a communication

ON THE GALVANIC CATAPLASMS OF PROFESSOR RECAMIER.

After some preliminary observations, Dr. Tilt stated that he wished to draw the attention of the society to that particular mode of the employment of electricity in which continued currents are generated by the contact of metals, by which means a large quantity of electricity is obtained at a low tension. He observed that there are many inventions constructed on that principle, but they are all ponderous, complicated machines, liable to get out of order, and therefore requiring the guardian of some one who well understands their action. The feelings of awe, too, with which the patient generally beholds them, interfere frequently with the effects desired to be obtained. He therefore was of opinion that a milder application of the same agency, by permitting its prolonged employment, would enable more good to be effected than by the previously employed energetic modes of application; and in this idea he is supported by Dr. Golding Bird, who, in speaking of the therapentical influence of electricity, says, "I was very sanguine that the current exeited by a single pair of zinc and silver plates, similar to those we employ to excite contraction in a frog, would be found of great value in practice." But Dr. G. Bird thought that to obtain an action, it was necessary to remove the cuticle from the skin, and then he found that the most oxidisable of the two metals produced sloughing of the skin, or, in other words, the electrical moxa of which he has shown the utility. Previously to this, Mr. Spencer Wells had ascertained that the removal of the cuticle is not necessary, and that by applying to the skin, previously moistened by diluted vinegar, two plates, one of silver and the other of zinc, connected by a silver wire, a marked electrical action was obtained, disordered functions of a particular nerve were restored to their normal state, and ulcerated surfaces were rapidly healed. Passing to the immediate object of the communication, Dr. Tilt mentioned that for many years Professor Recamier has made use of electricity by means of the energetic apparatus usually employed, and that a few months ago he presented to the French Academie de Médecine some remarks on a new mode of applying electricity by what he called galvanic cataplasms, consisting of filings of copper and zinc enveloped in cotton wool; that lately he had improved on this rather clumsy contrivance, and had sent Dr. Tilt the little apparatus he had the honour of submitting to the inspection of the fellows of the society; in explaining which Dr. Tilt said, each of the cataplasms or disks is a galvanic pile, composed of twelve couples. The couple is formed by a riband of zinc and copper, and each couple is separated by a piece of flannel. On the coloured side is cotton wool; on the other a piece of gutta percha tissue, to insulate the apparatus. The only difference between the two disks is, that in the pink the copper stands first, while the zinc comes first in the blue. The electrical force generated in the apparatus finds vent through the copper rings, to which the insulated copper wire can be attached when the more energetic of the two cataplasms is required. In some people the acrid perspiration of the skin is sufficient to increase the intensity of the electric action, but more active effects are produced by wetting the flannels with diluted vinegar, or a weak solution of common salt, as is proved by the action of the apparatus on the electrometer. An unusual sensation of warmth is felt when *one* of these cataplasms is tightly bound to the skin; a pricking sensation is felt, and the skin becomes red, when *two*, connected by the wire, are applied to the same surface, but at some distance from one another; and a stronger effect is produced when one disk is placed on the seat of pain and another on the spine. The apparatus (says Dr. Tilt) may, without inconvenience, be worn day and night, though in ordinary cases its application is only made at night; and as to its effect in disease, he remarks, that in the hands of Professor Recamier, it once brought on menstruation before the usual time, and he therefore intentionally applied it for that purpose, and with success, in cases of chlorotic amenorrhœa; Professor Recamier is also trying it in such cases of sterility as cannot be accounted for by any disease, but which seem to depend on defective ovarian action. Amongst other cases, on an illustrious lady whose barrenness menaces to extinguish one of the oldest dynasties of Europe; as well as on a Russian princess, also anxious for a family, in whom the first effect produced was, that menstruation, which formerly lasted but thirty-six hours, was prolonged to six days; but whether sterility will be cured by it time alone can show. Dr. Tilt is of opinion that it might be useful in curing some of those tedious cases of chlorosis, where a girl eats heartily, takes plenty of sleep and exercise, has nothing on her mind, but still derives but little benefit from either food or treatment. He thinks that this mild electrication may also take effect on the ganglionic nervous system, and give a spur to defective nutrition; he has therefore lately applied one of the disks to the epigastric region of a patient while the other was applied to the spine. Dr. Tilt added, that Professor Recamier has used these galvanic cataplasms with marked success in the treatment of rheumatic and nervous pains, in a case of obstinate constipation, in asthma; and a patient suffering from angina pectoris was benefited but not cured by their application. Dr. Massé and several other medical men in Paris find them successful in similar cases, as is detailed in the pamphlet Dr. Tilt begged to offer to the Society; and in conclusion, he said that he had only stated the results obtained by his venerable teacher; but had it not been the last meeting of the Society, he would have tested the utility of the apparatus by his own observations, before drawing the attention of the fellows to the subject, adding, that if, on account of the harmless appearance of the apparatus any should be tempted to consider it ineffectual, he referred them to an authority already quoted, who says, "From what I have seen, I am fully convinced, that if a feeble current were kept

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up for a long time, in certain forms of paralysis, (care being taken that the positive fluid traverses the limb in the direction of the nerves,) it would prove the most important mode of applying the remedy with success."

Mr. W. Taylor read a paper on

THE TREATMENT OF FEBRILE AND OTHER DISEASES THROUGH THE MEDIUM OF THE CUTANEOUS SURFACE.

The author began by alluding to the great mortality of fever, typhus, scarlatina, and measles in this country, which called for serious consideration. He then entered into a history of several such cases, in which he had been enabled to trace out that the agent which contributed greatly to the recovery of such patients, was lardaceous inunction. It allayed the dryness of the skin and promoted perspiration, producing sleep. He then entered largely on the subject of the function of the skin, and the noxious effects resulting from the arrest of its secretion upon the animal economy, and the good effect produced in the course of many diseases by the restoration of its function. The author then entered into a comparison between cold affusions or water-sponging and lardaceous inunction; the first being, in most cases, but temporary, and not unfrequently attended by danger. He then gave the history of cases of measles, fever, and scarlatina, illustrating the happy results of inunction; and concluded by strongly recommending this course of practice, not to supersede other means, but as one of the most powerful adjuvants he was acquainted with.

In the discussion which ensued, various fellows took part. Was the plan recommended novel? It was contended that it was not so, and Celsus was referred to in evidence. But this was met by a counter-statement that Celsus had never recommended oil in the mode practised by Mr. Taylor; but merely a mixture of oil and water to be rubbed on the surface to cool it. In fact oil was used generally by the ancients in most diseases. Had the oil any effect *per se*? It was generally considered that the real benefit in cases where Mr. Taylor's plan was employed, consisted in the friction resorted to, and cases were detailed in which soapsuds, and even sand, had been used with good effect. One speaker had employed Mr. Taylor's plan with much benefit, but he had not neglected the ordinary indications of treatment in the instances in which he had resorted to it. It was generally considered that the application of water, while at the same time it was more cleanly, would be found more efficacious; and very severe comments were made by some of the speakers on the practice which seemed to obtain of late, of vaunting some peculiar plan of treatment as a panacea in the cure of disease, whilst the more legitimate modes of practice were neglected. The evils of such proceedings were incalculable, as they not only obstructed the course of legitimate inquiry, but tended to throw discredit generally on the practice of scientific medicine. The author in his reply declared that he had brought the subject before the Society in order to give his plan of treatment publicity, and to induce others to give it a trial, and decide upon its effects by their own experience. Far from bringing it forward as a panacea, he begged to say that he never neglected the mode of treatment by medicines which was indicated by the symptoms; but in cooling the skin, in inducing perspiration and sleep, he had found frictions on the surface, with the ointment he had named, far superior in their effects to any other mode he had employed. The treatment, however, was only auxiliary to other remedies, and as such he begged to recommend it to the notice of the profession.

This being the last night of the session, the President made a few congratulatory remarks on the success of the past session generally, and referred to the importance of fellows forwarding their papers early to the council.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

June—July, 1851.

On Fatty Degeneration of the Placenta, and its Influence as a Cause of Abortion, Death of the Fœtus, Hæmorrhage, and Premature Labour. By Robert Barnes, M.D. Lond.

The author commences by relating two cases of premature delivery at the seventh month. In the first, flooding occurred twice without obvious cause and unaccompanied by pain—at the third month, and again at the seventh month, when labour followed. In the second case there was no hæmorrhage previous to delivery. In both cases, death of the child had occurred some time previous to delivery. In both cases the placenta was studded with fatty masses, apparently isolated from the surrounding structure. These masses were firm, yellowish-white and bloodless. On careful dissection, it was obvious that the diseased and apparently healthy portions of the placenta were continuous, and that the fatty masses were the result of fatty deposit or degeneration in the proper placental structure. In one case, branches of the umbilical vessels in an atrophied condition were traced through several of the fatty masses. In the examination of the minute structure of the altered parts, the author had availed himself of the assistance of Dr. Hassall. The following conclusions had been arrived at:—The placental villi were thickly studded with innumerable minute spherules of oil. The chorion was much altered; thickened, destitute of nuclei, of a yellow colour, and more or less broken and detached from the vessels. The umbilical capillaries no longer presented nuclei in their walls, these being replaced by spherules of oil. The spherules of oil were contained, some in the chorion, others in the walls of the bloodvessels, many in the intervals or spaces between these. The cavities of the vessels were almost exclusively free from fatty deposition. The vessels were destitute of blood. In some parts the process had extended to complete disintegration of original structure. In those parts that, to the naked eye, appeared healthy, evidences of fatty deposit and degeneration being in progress were observed. A number of specimens of sound placentæ had been examined, and the occurrence of a certain proportion of oil as a normal constituent had been determined. (Drawings showing the microscopal appearances were exhibited.) With the exception of a case of fatty degeneration of the placenta, recorded by Professor Kilian, and of which an abstract appeared in the *British and Foreign Medical and Chirurgical Review*, for January, 1851, no distinct recognition of the nature of the affection is to be met with. The author regards the fact of the occurrence of this change of structure in the placenta as highly interesting both to the pathologist and to the obstetric practitioner. It promises to throw light on the disputed question of hereditary transmission of predisposition to this disease. It shows how rapidly such change of living structures may take place. The conversion of portions of placenta into solid unyielding structure, and the consequent imperfect attachment of these portions, and of the surrounding healthy structure, to the womb, give rise to hæmorrhage, and premature labour may occur possibly during the life of the child. A more frequent occurrence probably is the destruction of the fœtus in consequence of imperfect nutrition, and by a process of slow asphyxia. Fatty degeneration may also cause abortion in the early periods, the ovum being affected.

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With reference to treatment, it was suggested whether the known disposition to this destructive change, if established by the observation of preceding pregnancies, might not warrant the induction of premature labour, with the view of anticipating the period at which the fœtus would almost certainly be destroyed if left in the womb. Some suggestions were also offered with reference to the general treatment to be adopted with a view of counteracting the disposition to fatty degeneration before and during pregnancy. The paper concluded, with the expression of the hope entertained by the author, that this account of the process of fatty degeneration in the placenta would be accepted as a useful contribution in extending the knowledge of an important subject in general pathology, and in directing attention to a source of danger to mother and offspring, comparatively unnoticed in obstetric practice.

Dr. Quain said that in the communication, which he had listened to with great interest, the author had spoken of fatty deposition and fatty degeneration synonymously, whereas they were processes entirely distinct in their nature and their effects. The deposition of fat from the blood led to the formation of adipose tissue; fatty degeneration, on the other hand, was a result of the disintegration of albumen and fibrin, and of the tissues into the formation of which they entered. There was here no adipose tissue, but a mere aggregation of granular particles. This disintegration may be witnessed in the formation of adipocire, or it may be made to occur experimentally in dead flesh, and the changes could be then followed by the microscope. It may likewise be observed in various albuminous, fibrinous, and other products in the living body, but beyond the sphere of vascular action, and also in various tissues and textures, the nutrition of which had been modified by inflammation, obstruction to the bloodvessels, &c. He (Dr. Quain) thought that the disease of the placenta under discussion was due to some analogous condition, to inflammatory action or to some modification of the circulating and nutritive apparatus of the organ, by which the albuminous or fibrinous elements of the blood were retained in the bloodvessels, or extravasated, and then subjected to the process referred to. We were aquainted with a tough, leathery state of the placenta, with calcification of the organ, and the origin of these states was no doubt to be explained in the same way. It was only by tracing these morbid conditions to the primary lesion which produced them, that we could hope to suggest the means by which their recurrence could be prevented.

Dr. C. J. B. Williams was desirous of directing the attention of the Society to some points which had been adverted to by Dr. Quain, in connexion with the subject before them. The whole topic of fatty degeneration was one of growing importance, not only as constituting a serious lesion in itself, but also as forming a remarkable element in several other morbid processes, and, in cachectic states, of very common occurrence. He (Dr. Williams) thought that the author's observations had clearly established the existence of fatty degeneration of the placenta in the cases narrated; but he could not admit it to be probable that this was the primary lesion, or one against which practical measures, to prevent abortion, could be profitably directed. It appeared to him (Dr. Williams) that the author had, in common with many of the present day, too much regarded fatty degeneration as an independent and original vital process, like that causing hypertrophy, or malignant disease, instead of being, as it truly is, a chemical transmutation of fibrinous or albuminous deposits or textures, consequent on a failure of that degree of the nutritive process necessary to maintain a higher order of structure. One of the earliest observers who had set this matter in its true light was his friend Mr. Gulliver, who, in his paper on the "Atheroma of Arteries," published in the Society's *Transactions*, and subsequently in his editions of Gerber and Hewson, had made known many examples of fatty degeneration of deposits and textures, and had suggested the probability that the change is chiefly chemical. About the same time, he (Dr. Williams) had compared this fatty transmutation in the living body to the conversion of dead flesh into adipocire; and had cited numerous instances, in which the products of inflammation and obstructed natural tissues undergo more or less of a similar change during life. The researches of his friend Dr Quain seemed to him (Dr. Williams) to have completely established this view, and to have further traced many of the modes in which impeded nutrition promoted the degradation of the natural tissues into molecular fat. It seemed to him, (Dr. Williams,) therefore, that it might now be received as a general law, that whenever tissues or deposits are imperfectly supplied with blood, yet are sufficiently nourished to keep them from becoming dry or decomposed, there will be found the process of fatty transformation, more or less resembling the same change which takes place out of the body. Thus, imperfectly-organized lymph in the pleura, pericardium, or peritonæum; lymph in the texture of the lung or of cellular membrane; fibrinous clots in vessels; blood-clots in the brain; soft, recent enlargements of complex organs, as of the liver, kidneys, testicle; crude tuberculous masses, and torpid growths, non-malignant and malignant, had been repeatedly found by him (Dr. Williams) to afford, under the microscope, the clearest evidence of falling under this law. This law is, in fact, a most satisfactory clue to much that has been hitherto obscure in pathology, and unravels much of the mystery of the processes of softening of tissues, maturation of abscesses and tubercles, the breaking down of consolidated masses in spongy organs, and the weakening and wasting of muscular and glandular structures. But this view would teach us to look beyond the mere fatty degeneration itself to the impaired or obstructed circulation, and sometimes altered condition, of blood, which was its cause; and, as in the case of the fatty portions of the placenta, of which they had been hearing, it must often remain a question whether the degeneration was not rather the consequence, than the cause, of the most serious disorder.

Mr. Streeter hoped the monograph just read would be published in the *Transactions*, where no disease of the placenta except that of adhesion to the scalp, had as yet appeared. That had been recorded by him whom he might well call the obstetriarch of the society, Dr. Robert Lee. In Braschet's Memoir in the *Journal de Médecine*, the theory of inflammation was employed to explain all morbid phenomena. At the present day, the views of fatty degeneration and of fatty diathesis were carried as far, but he thought these hypotheses could not be fairly regarded as the sole causes of placental disease. The placenta certainly consisted of uterine and fœtal portions separated by an intermediate membrane, an independant development most probably from the villi of the chorion. He made it an invariable rule of practice to carefully examine the maternal surface after every confinement, and to watch with extraordinary care for the approach of uterine symptoms wherever he saw morbid change in the placenta; because a proneness to disease may reasonably be referred to exist in the portion of the uterus which had corresponded to the morbid surface of the expelled placenta. He stated that disorganization of one or more lobules was by no means uncommon, and certainly not always uniform in its character.

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He regarded this limitation as a necessary consequence of anastomosis being confined to the larger trunks, and not existing between the terminal branches of adjoining lobules. Comparative anatomy in the Ruminants, and Mr. Goodsir's microscopic examinations of the human placenta, went far to prove that the fœtus was nourished by a milk-like secretion from the uterine element of the placenta—a development from a true mucous membrane—and that this secretion was imbibed by the looped and terminal capillaries of the placental tufts of the umbilical circulation—the true fœtal element of the placenta. A local error of secretion in the uterine membrane, or an accumulation of its products round the umbilical capillary tufts, from defective power of imbibition in a weakly fœtus, seemed to him more probable hypotheses than the one of fatty diathesis in the systemic circulation of the mother finding relief by a local deposit of its overcharge of fat in the cellular element of the placenta. It was the glandular mucous membrane lining the interior of the uterus which, he believed, received the seeds of syphilis from the male semen, and in which syphilis remained dormant till developed with the growth of the membrane in pregnancy, when its poisonous secretion destroyed the fœtus long before acquiring intensity sufficient to enter and infect the general system of the mother. He would not allude to his published views on the causes of miscarriage, further than to say that all subsequent inquiry and experience strengthened his belief that the early death of the embryo was the result of some interruption to its respiratory function, and not to any disease of the placenta itself. Nearly all the instances of apparent disease of the placenta would, on careful examination, be found owing to arrest of the development of the umbilical tufts by the death of the embryo, and the consequent sanguineous effusions and inharmonious development of the maternal portions of the organ.

Dr. Lee said that notwithstanding the assertion made by M. Braschet in 1833, that all the changes observed in the placenta were the result of inflammation, he had come to the conclusion that no organ was so little liable to inflammation as the placenta. He had never seen false membrane or pus as the result of inflammation in it. He had seen coagula of blood so changed as to resemble pus; but there had been no proof whatever that inflammation had ever existed. The placenta, however, was liable to changes, as had been shown most elaborately by Cruveilhier, who had given a full description of hypertrophy and other morbid states of the organ. He believed the cases mentioned were cases of hypertrophy, and not of fatty degeneration at all; and some specimens examined by Mr. Wharton Jones had confirmed him in this opinion. It was not uncommon, in cases of abortion, to find a white matter under the placental decidua, and a hard yellow semi-cartilaginous matter in the centre of these coagula of blood; but this did not consist of fat, but was a diseased condition of the villi of the chorion. In his eighteenth lecture in the *Medical Gazette*, he had mentioned a case in which there was an appearance of adipose matter in the placenta, but there were no cases in which the placenta was degenerated into fat. Mr. Wilde had described a case of what he had called fatty placenta, but he (Dr. Lee) believed that in that instance the disease consisted in a change of the villi of the chorion obstructing the circulation. He had seen this disease of the placenta in the same woman in seven or eight deliveries. It usually runs its course before the induction of premature labour could be of service. He had seen it in various stages of development, and if not in a high degree it did no harm to the child, the child being born alive, though weak and emaciated. Dr. Lee then related the case of a lady, who, having been frightened at the theatre, was carried home, and premature labour came on immediately. The child was dead, and the placenta on one side healthy; the other side being completely atrophied. In this case it was not fatty degeneration. The effects of such a condition of the placenta were well known, but the cause of it was almost impossible to determine: there seemed nothing positive to explain. Sometimes it appeared to have its origin in syphilis, and then a course of mercury did good; but in other instances this remedy was of no avail, and the disease went on. Sometimes the disease disappeared as it were spontaneously, and living children were afterwards born. Abortion might be caused by a great variety of diseases of the ovum unconnected with inflammation, and he had seen cases in which children had been born dead without there being any disease at all of the placenta. The placenta, again, was sometimes degenerated by portions of it being converted into serous cysts under the placental decidua. This state was a frequent cause of abortion, as a slight development of the condition might induce the uterus to throw off its contents.

Dr. Barnes, after thanking the society for the attention which it had given to his communication, said that he had read Dr. Quain's paper with much instruction, but had not been convinced of the necessity of the distinction Dr. Quain had drawn between fatty deposition and degeneration. As Dr. Barnes understood the term, and as he had observed the affection in the placentæ in question, he was led to believe that deposition and degeneration were different stages of the same affection. He felt great diffidence in dissenting from the explanation of these cases given by Dr. Williams, but he could not admit that the fatty degeneration was the result of the death of the fœtus, or of previous disease in the placenta. The history of the cases, and the development the fœtus had in both cases attained, convinced him that the fatty degeneration was the cause of the death of the fœtus; and no evidence of any other disease or morbid deposit was detected in the placentæ. Moreover, the affection had been traced in the apparently healthy portions as well as in those more obviously altered, through every stage, from simple deposition on the walls of the umbilical vessels, their investing chorion, and the other normal tissues of the placenta, to actual degeneration and disintegration. Dr. Barnes referred to another case which had come into his possession, in which the affection presented itself under a different phase, and in which undoubtedly fatty metamorphosis of the placenta had taken place after the death of the fœtus. He should beg permission to lay an account of this specimen, which still existed, before the society on a future occasion. Dr. Lee objected to his paper that he had not referred to the labours of Cruveilhier; he had not neglected to consult Cruveilhier, but had not found the slightest mention of fatty degeneration in that author's account of the diseases to which the placenta was liable. Cruveilhier referred all diseases of the placenta to hypertrophy, atrophy, hydatids, apoplexy, ossification, and especially followed Braschet in mainly insisting upon inflammation, a disease which Dr. Lee denied, as well as fatty degeneration. He regretted that Dr. Lee disputed the existence of fatty degeneration of the placenta. He could only appeal to the description of the cases before the society, and the faithful delineations of the altered structures by Dr. Hassall, submitted to the society. These would speak for themselves. So far from admitting that the cases he had adduced were not examples of fatty degeneration, but, as Dr. Lee asserted, of some other affection, he was disposed to believe that many cases described by authors as cases

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of scirrhous or fibrinous deposits might in reality have been instances of fatty degeneration.

Mr. Hodgson remarked that there were various kinds of diseases to which the placenta was liable; some of these were most interesting, and seemed to depend upon the constitution of the parents, as syphilis. He trusted that the subject would again come before the society.

Cases in which there was Unusual Difficulty in the Diagnosis of Pleuritic Effusions. By T. A. Barker, M.D.

The first case related by the author was one in which there was extensive emphysema of the left lung which had encroached greatly on the right side of the chest, pushing the heart and mediastinum beyond the mesial line. The right lung was closely adherent to the costal pleura, was reduced to about a fourth of its usual size, was exsanguine, and contained no air, resembling a lung compressed by effusion in the pleura. In consequence of these changes, no respiration could be heard in the right lung during life; the right side of the chest was universally dull on percussion, and the patient could only lie on the right side or sit erect. Along with these symptoms were others, closely resembling those which usually attend hydrothorax; and the dyspnœa, and symptoms of approaching apnœa, being very urgent, the author thought himself justified in having a very fine trocar introduced into the chest, in order to ascertain positively whether there was fluid. No inconvenience resulted from the operation, and the symptoms were soon afterwards explained by the discovery, on post-mortem examination, of the very unusual state of parts above described. The next case was one in which, without any of the general symptoms of pleuritic effusion, it was discovered by auscultation, &c., that there was no respiration going on in the posterior third of the left lung. In four days the person died; the lungs were healthy, but there was extensive effusion confined to the back part of the chest by a very narrow line of adhesion extending from the upper and back part of the chest to the diaphragm, half way between the ribs and the sternum. The author referred to three other cases which he had seen, in which pleuritic effusion had been limited by adhesions in the same position and precisely similar; only one of these had been seen by him during life; and in that the symptoms closely resembled those in the case last related. Two other cases were shortly alluded to, in which there was emphysema to a considerable extent, but respiratory sounds could be heard in every part of the affected sides, in consequence of the lung being kept partially in contact with the ribs by numerous adhesions forming several separate cavities in which the purulent matter was contained.

After a pause of a few minutes,

Dr. Theophilus Thompson rose, and said that although he had only entered the room after the paper had been partially read, he thought it of too much importance to be passed over in silence. He would therefore make a remark or two on some of the points broached by the author. With respect to the occurrence of severe pain in some part distant from the seat of disease, in cases of inflammation of the pleura, he believed that this was no uncommon occurrence in the practice of others. He had seen a case in which the pain was confined entirely to the right hypochondrium, and yet the pleura on that side was inflamed. In another case of severe pleurisy, in which leeches, bleeding, and other active remedies were employed, the patient died, and there was found extensive deposition of lymph in the pleura; the patient had suffered from most severe pain in the lower part of the abdomen, but there was no disease in that region. Dr. Thompson then referred to the vibration of the wall of the chest as felt by the hand, as one of the conclusive symptoms of pleuritic effusion. This and the dulness on percussion were generally sufficient to denote the nature of the case; other symptoms might help, but these were the essential ones. With respect to the vocal thrill, there was more of this where there was no effusion than where there was, and this was also a ground of diagnosis. He could corroborate the circumstance mentioned in the history of the case, as to hearing the respiratory murmur over the seat of effusion; he had himself heard the sound in similar cases; but was it a direct or indirect murmur? He mentioned a case in which the respiratory murmur was so clear in a case of effusion, that the surgeon in attendance was unwilling to operate.

Mr. Hodgson said that on one point of the paper his experience coincided with that of the author—he alluded to the occurrence of pain in a distant part, in cases of disease of the chest, as pneumonia or pleuritis. This pain was sometimes over the lower part of the abdomen. In cases of affections of the lungs following accidents and operations, the pain was often found in the abdomen. He had known a case of this kind, in which the patient was treated for hepatitis, although the liver was not really affected. With respect to the diagnosis of effusion into the cavity of the chest, it was most important to attend to the vocal thrill, and the absence of respiratory murmur in these cases; but these indications were not alone sufficient to induce us to open the chest. They might be produced by a solid condition of the lung caused by other diseases. They were therefore not sufficient in themselves to establish a rule of practice.

Dr. Seth Thompson considered that vocal thrill was always present in cases of solidification of the lung, and that it thus formed a means of diagnosis between effusion and solidification.

Dr. T. Thompson agreed in this opinion.

Dr. Barker, in reply, said that he brought his cases before the society in consequence of having never met with similar instances before, and because they were illustrative of the occasional difficulty we experienced in diagnosing diseases of the chest. With respect to the vocal thrill, in the first case, there was no vocal thrill on either side of the chest: in the second case it was difficult to say whether vocal thrill existed or not, the patient being in that enfeebled state when in the hospital, that it was impossible to determine the point satisfactorily.

A Case in which a Fibro-cellular Tumour was removed from the Hand. By Samuel Solly, F.R.S.

A married woman, aged forty-nine, was admitted, under Mr. Solly's care, into Queen's ward, at St. Thomas's Hospital, February 22, 1851, with a tumour on the palm of the left hand, having very much the shape and appearance of a large potato of an oblong shape, the diameter varying from three to five inches, and attached by a broad pedicle. Some patches of ulceration existed, two or three lines deep, having none of the characters of malignant disease. The surfaces bled easily, and were surrounded by a limited blush of redness.—The tumour was elsewhere of a pale colour, with small tortuous veins ramifying upon it. It had an elastic feel, much like that of encephaloid disease; in some parts giving the idea of fluid; in others, firmer. There had been increase of pain of late, but it was not constant, and depended much upon position. The health had been but little affected. The tumour encroached upon all the fingers, but did not prevent their flexion and extension, and a considerable portion of the skin

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of the palm remained intact. Much difference of opinion existed as to the nature of the disease, whether malignant or not. Mr. Solly was inclined to consider it as a species of enchondroma. By a grooved needle some jelly-like stuff was obtained, containing much granular matter, with many exudation corpuscles, and some few spindle-shaped cells, with here and there a common epithelial cell. Mr. Solly removed the tumour on March 1, 1851. When examined, it had the appearance of an enchondroma of a soft kind. There was a firm, white, dense matrix, enclosing glairy fluid. No true cartilage could be found. Portions of the tumour were sent to Mr. Quekett, and also to Mr. Birkett.—Communications from these gentlemen show that they agree as to the non-malignant character of the disease. A careful report of the actual condition of the tumour after removal, drawn up by Dr. J. L. Bristowe, also tends to the same conclusion. The wound was of a healthy character, and, on the 19th of March, it is reported to have been only one-fourth of its original size, the swelling and tenderness of the fingers diminished, the back of the hand regaining its natural appearance.

Mr. Hodgson said, that there was great reason to believe that the case related was one of enchondroma, in which appearances such as those described were not unfrequently found. He thought the best proof that the growth was not malignant consisted in the fact that it had existed for thirty years. In the interesting lectures lately delivered by Mr. Paget, a case was related of enchondroma, in which the tumour was situated on the hand, though not on the palm, in which the structures were similar to the one under discussion.—The paper was also interesting, as showing that the microscope could not determine whether the tumour were malignant or not.

Mr. Solly had nothing to add to the observations which he had appended to the case, except to repeat that the tumour had been thought, by men of great experience, to be malignant, and that he had operated in opposition to this opinion. The cicatrix continued sound; the woman was in good health, and had none of the peculiar appearance which usually attended malignant disease. However, whatever might be the ultimate result of the case, he would communicate it to the society. The case was interesting from the depth of the parts exposed by the operation.

Aneurismal Dilatation of the Posterior Tibial Vein, communicating indirectly with the Popliteal Artery. By Edward Cock.

G. M——, aged twenty-eight, a tide-waiter, was admitted into Guy's Hospital, October 30, 1850, for a large swelling on the back of his leg, which had come on after a long and severe attack of fever. The swelling had all the indications of being a deep-seated abscess under the gastrocnemic muscles. Eleven years previously, his femoral artery had been tied for secondary hæmorrhage following a wound in the popliteal space. He had perfectly recovered from the accident and the operation, and the only inconvenience he ever experienced was a dilatation of the superficial veins of the leg, which took place about two years afterwards, and became permanent. On October 30, a puncture was made in the swelling, which gave exit to nearly three ounces of dark, grumous, pitchy blood, which did not coagulate, and had evidently been extravasated for a considerable period. Two days after the puncture had been made, nearly a pint of pus escaped from the wound, to the great relief of the patient, and the abscess continued to discharge, and diminished in size during a period of twelve days, the man's health and strength daily improving. On November 14, sudden and alarming hæmorrhage, to the extent of nearly three pints, took place from the wound. The cavity of the original abscess became distended with blood, and infiltration was rapidly taking place into the tissues of the leg, and through the popliteal space towards the thigh. It was judged expedient to amputate the leg above the knee, after which the man got perfectly well.

Examination of the amputated limb.—In the popliteal space, corresponding with the original seat of injury eleven years previously, there existed a small sac, into which opened the popliteal artery, and to the walls of which were attached the termination of a fibrous cord, which represented the popliteal vein obliterated up to the line of amputation. Leaving the sac from its inferior surface were two vessels, the one being the continuation of the popliteal artery, reduced in size, and passing down to be distributed normally to the leg; the other, the popliteal vein, permeable, dilated, thickened, pouched, and puckered, which passed down, and divided as usual into the anterior and posterior tibial veins. The former was completely obliterated; the latter immediately terminated in an aneurismal dilatation, about as large as a hen's egg, and situated under the soleus muscle. An irregular opening in the sac communicated directly with the cavity which had constituted the abscess when the patient first came under observation, and which subsequently (at the period when the hæmorrhage took place) had become distended with blood, derived from the popliteal artery by means of its communication with the vein. All the deep-seated veins of the leg had evidently been long obliterated, and were occupied by solid coagulum, the blood having been returned through the agency of the superficial veins.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY,
IN THE
HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, et dissectionum historias, tum aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et caus., Morb.*, lib. 14. Præmium.

ST. BARTHOLOMEW'S HOSPITAL.

Lesion of the Kidney; Hæmaturia; Suppuration; Death; Autopsy.

(Under the care of Mr. Stanley.)

Idiopathic affections of the kidney have of late been so carefully studied and elucidated, that the physician is, in general, enabled to form a pretty accurate diagnosis, when the symptoms are sufficiently distinct. Among the latter, hæmaturia might be mentioned as likely to cause a little embarrassment, as it is not always easy to ascertain from which portion of the extensive mucous membrane—beginning at the meatus and ending at the kidney—the blood proceeds. When it has been discovered that the hæmorrhage does not proceed from the urethra or bladder, and that the kidney seems at fault, it has generally been found that the most frequent cause of hæmaturia is the laceration of vessels of the infundibula or pelvis, produced by sudden displacement of a calculous concretion.

The effect of lacerations is shown in a very instructive manner in cases where an external injury has caused such a lesion, for the careful observation of symptoms, in these instances where the laceration is almost certain, will go far to guide us in idiopathic cases. This is, however, not the only interesting point in the case which we desire to put upon record, for an admirable opportunity is afforded by the different

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phases of the same, to observe the effects of certain substances used to control hæmorrhage, and likewise to follow in a traumatic case, the formation of abscess. The case runs as follows:—

Henry B——, a middle-aged man, of moderate stature, a stone-mason by trade, and who for the last eight years has led a very intemperate life, was admitted into Kenton ward, December 23, 1850, under the care of Mr. Stanley. Two days before admission, whilst crossing London Bridge, he was knocked down by a cart, the wheel of which passed over his right thigh, and the same side of the abdomen. He has since that accident experienced great pain, which he refers to the region of the right kidney, and he has noticed that a good deal of blood has passed with his urine since the time of the accident. The countenance is very anxious and expressive of pain; the patient lies on his back, with his legs down straight: the respirations are short, and rather hurried. Pulse 100, sharp, of moderate volume, and soft.

Mr. Stanley ordered sixteen leeches to the painful part, and half a grain of opium every sixth hour. The patient progressed pretty favourably for the first week, after which period a quantity of blood appeared in the urine, and the pain in the region of the right kidney returned. The opium treatment was persevered in, but blood continued to be passed, not being distinct from, but quite mixed with the urine. The patient was now ordered to be cupped to six ounces, over the region of the right kidney; but only four ounces were obtained. The next day he was worse, and passed sixteen ounces of pure blood per urethram; it coagulated just as if drawn from the arm, but the clot was brighter and not so viscid as after venesection.

Mr. Stanley now had twenty-four leeches put to the right renal region, and prescribed five grains of gallic acid, to be taken every third hour; a cold enema, with castor oil, was administered; the patient took everything cold, and was desired strictly to observe the horizontal position. Nevertheless the hæmaturia continued; for the gallic acid, were therefore substituted fifteen minims of the tincture of sesquichloride of iron, to be taken every second hour; this was followed by an improvement, and on the next day, being the eleventh after admission, one grain of acetate of lead, with a quarter of a grain of powdered opium, were ordered, whereupon all traces of blood in the urine almost entirely disappeared. On the seventeenth day, however, the blood re-appeared, and the patient became very weak; he was now given wine and beef-tea, and ten minims of oil of turpentine, in mucilage, three times a day. The hæmaturia continued, though lead and opium were again tried; and on the twentieth day, gallic acid in the dose of five gains, in an infusion of matico, was administered. These means, though accompanied by applications of salt and ice to the right renal region, were however powerless.

Mr. Lawrence, upon a consultation being held, advised quinine, which, in his hands, had succeeded in restraining the hæmorrhage in a case of a similar description. The patient was therefore ordered three grains of the disulphate every third hour, and was well supported. Two days afterwards the urine was much improved, there being scarcely any blood mixed with it.

The left lung was, however, now attacked with pneumonia; Dr. Roupell, who saw the patient, advised his being cupped below the spine of the left scapula, and calomel, antimony, and opium to be given. These measures relieved the pulmonary affection in a marked degree, the breathing became easier, and the urine quite clear. The symptoms remained pretty favourable for about six days, when the patient became very feeble and haggard-looking; ammonia was administered, and the beef-tea and wine resumed. The next day the blood re-appeared in the urine, though not to a large amount, and the quinine was resumed. A bulging on the right side of the abdomen, a little above the crest of the ilium, which had before been observed, remained dull on percussion, though no fluctuation could be discovered in it. On the 13th of February, being the forty-third day after admission, fluctuation was felt in the lumbar region; Mr. Stanley made a small incision through the integuments and the abdominal muscles, and exposed the fascia transversalis, which was very tense; a grooved needle being introduced, pus presented itself. On the opening being enlarged, a quantity of fœtid pus escaped, having a distinct odour of urine.

The condition of the patient oscillated much after the opening of this abscess; nineteen days after this operation, a decided change for the worse took place; the pain was greatly aggravated; the patient passed much urine by the wound, and none per urethram, for thirty-six hours; a catheter was introduced into the bladder, and about a pint of healthy urine drawn off. From this period the abscess continued to discharge pus and urine; the patient grew gradually weaker, and died on the 22nd of March, just three months after the accident.

The body was found very much emaciated; the peritonæum contained no fluid, but the sub-peritonæal tissue presented in various places a peculiar inky appearance, these spots being confined to the right side of the abdomen. The right kidney was small; its pelvis torn, as well as a part of the renal substance toward the apex, the aperture communicating with a kind of cyst behind the peritonæum and iliacus muscle, which contained a quaintity of turbid purulent fluid and some coagula of blood. A bougie passed from the external opening went into this large collection of matter. The iliacus muscle had a sodden and leaden appearance; the right kidney contained two small patches of capillary phlebitis. The left kidney was healthy; the pericardium adherent to the heart; adhesions were likewise found on both sides of the chest, but the rest of the viscera were healthy.

Cancrum Oris; Recovery.

(Under the care of Dr. Burrows.)

Pathologists have not as yet determined how it comes to pass that mercury has a direct action on the salivary gland, and produces more or less severe stomatitis; nor is it much clearer why, under certain circumstances, the mouth of young subjects is attacked with a gangrenous inflammation which often destroys the patient. Whatever may be the final cause of the latter phenomenon, it is of a very important nature, both to the physician and the surgeon; for in this affection, as well as a few others, medicine and surgery are closely blended.

We are accustomed to look for cancrum oris in children aged from five to ten years, or from two to eight years; but it would appear from the age of the patient (thirteen) lately under the care of Dr. Burrows, that a very early age is not an invariable circumstance. Adults, however, seem quite free from this peculiar affection, for it is stated by Taupin, that in a total number of 1900 cases attended by him at the Hotel Dieu at Paris, in 1837, only one adult suffered with cancrum oris. The latter manifestation is generally said to attack children exposed for some length of time to debilitating causes, and what Richter calls the metastatic species supervenes on acute exanthematous diseases; it is likewise maintained that measles take the lead as a predisposing cause. To these opinions should be added, as will become apparent by the subjoined case, that common continued fever may be accompanied by gangrene of the mouth, though it would seem that in such cases the ulcerative process

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does not go so far as to cause the perforation of the cheek.

That the disease is very dangerous and frequently proves fatal, has been acknowledged by all observers, the proportion of deaths depending very probably on the variety of the affection, namely, whether it be:—1st, peculiar to infants at the breast; 2nd, attacking children enfeebled by some previous disease; or, 3rd, confined to the cheeks and lips (Cumin.) We now beg a few moments' attention to the following case.

Emma H——, thirteen years of age, was admitted into Faith ward, under the care of Dr. Burrows, Dec. 18, 1850. Her countenance is pale, languid and heavy, the pupils dilated, the conjunctivæ suffused; the skin is warm and rather moist, but no rash or sudamina can be observed upon it. The tongue presents a dry and brown fur in its centre, the abdomen is soft, moderately painful on pressure in the lower portion, and especially round the umbilicus.

Alvine evacuations have been liquid, dark, and bilious; there has been some vomiting, and the patient states that she has been ill three weeks, the complaint having begun with pain in the limbs and back; delirium had set in two days before admission, and purging and vomiting had continued for the same period.

Dr. Burrows ordered wine and beef-tea; the hair to be shaved, and cold lotion applied to it, if necessary; four leeches to the abdomen, and a mercurial purgative. From this period to the twelfth day after admission, the patient went through the different phases of mild typhoid fever without maculæ, when she appeared much improved; but the right cheek was now noticed to be swollen, the patient having the night previously been rather restless. The patient complained, however, of no pain, though the face continued to swell, and was becoming red. She was ordered to take chlorate of potash with bark, and to use a gargle of chloride of soda. Mr. Stanley being consulted, advised the application of nitric acid, if the cheek did not improve.

There was now noticed, on the internal aspect of the cheek, a greyish slough, which posteriorly looked quite black. The pulse was 136, with tolerable volume; and the bowels relaxed. Wine, beef-tea, &c., were ordered; and Mr. Lloyd having likewise seen the patient, suggested applications of nitrate of silver to the gangrenous part. On the eighth day after the appearance of the gangrenous stomatitis, the cheek was reduced in size, and less red; in the centre a circle, about the diameter of a shilling, was noticed; it was soft to the touch, the parts around being firm and indurated. The slough within the mouth was of a grey colour, and the edges of the sore connected with it very slightly inflamed. Dr. Burrows now prescribed ammonia and bark, and a poultice to the face. On the tenth day an offensive slough of considerable size was detached from the mouth; the cheek became much diminished in bulk, and presented a circumscribed patch of dusky redness, over which the skin appeared about to desquamate. The patient took her food in the meanwhile, though with reluctance, as swallowing gave her much pain. The cheek gave the feeling of great tenuity at the affected spot; within the mouth was seen a deep and excavated ulcer occupying the situation of the two last upper and lower molar teeth, with a small portion of slough remaining anteriorly.

On the twelfth day the left commissure of the lips became much fissured. The patient now used, within the mouth, a lotion of fifteen grains of chlorate of potash in decoction of bark, and the wine and nourishing diet were continued. The interior of the ulcer was covered with a grey slough, and of the thickness of the cheek at that point nothing but the integument seemed to be left, the second bicuspid tooth having dropped out. On the sixteenth day another tooth from the upper jaw fell out, and on the twentieth pain was complained of; the gangrenous spot was darker externally, and the cuticle dry and desquamating over it. The patient, however, opened her mouth with less difficulty, and the sores on the left angle of the mouth were healing.

On the twenty-third day, after the accession of the gangrene, the dark spot on the face was situated at the base of a considerable depression on the side of the cheek; and around the darkest portion a circular superficial crack had made its appearance, enclosing a space about a quarter of an inch in diameter; and the part so enclosed resembled a scab. From this time an improvement began to take place; the size of the sore within the mouth diminished, and was covered with a white slough, resembling boiled albumen. Externally, the superficial crack was a little deeper, and somewhat tender to the touch.

On the thirtieth day the patient's appearance was much improved. On the right cheek a depression remained, slightly dusky in appearance, tender to the touch, but not feeling so thin as formerly. Another of the upper teeth now dropped out. On the thirty-third day the cheek, externally, presented a smaller depression, as well as a less dusky appearance; and internally the ulcer was gradually contracting. On the fortieth day the ulcerated surface within the mouth had regained its mucous lining, and appeared healthy; though on its margins, and in the alveolar depressions whence the molar teeth had fallen out, there was yet a whitish grey foul slough. Still the above-mentioned lotion has been used up to the present time. A complication of some importance, which occurred about this period, consisted of pain, redness, and swelling in the elbow of the right arm, as well as a certain amount of deafness: these symptoms were, however, removed by the usual means.

On the forty-third day there still remained a small slough on the posterior portion of the original gangrenous sore, and the alveolar portion of the upper jaw (the three molar teeth of which were absent) became exposed, and the bone necrosed. On the fiftieth day the patient sat up, slept well, and enjoyed a good appetite. No trace of ulceration remained within the mouth; the alveoli, however, were still in a necrosed state. An evident hysterical reaction now took place—a circumstance easy of explanation at the patient's age—and she would frequently burst into tears. She was discharged in a favourable condition, but the change of scene and objects seemed, on her return home, to act powerfully on her debilitated frame; for, when with her friends, she became delirious, and was much excited. These symptoms continued for several days, and were treated by purgatives, low diet, &c. The former took full effect; large quantities of scybala were passed, and the patient rapidly regained full consciousness and tolerable health. A large portion of the superior maxillary bone came away about nine days after her discharge, and another loose piece will have to be removed before the mouth can be pronounced well.

The favourable turn which this case has taken will show that deterging and caustic applications, combined with tonic medicine and stimulants, will conquer the fatal tendency of this dangerous affection. It will be perceived how close at hand was the actual perforation of the cheek; the phagedenic process, however, was luckily arrested, but the osseous texture did not escape; and the necrosis of the alveoli will bear a lasting testimony to the severity of the morbid phenomena.

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Cases of Strangulated Hernia; operation without opening the Sac.

(Under the care of Mr. Lloyd.)

Two months ago we had the pleasure of recording a case of strangulated femoral hernia in a male patient, operated upon by Mr. Hancock. In that report we attempted to place in juxta-position the opinions of those authors and operating surgeons who differ as to the propriety of opening the sac; and for that purpose we largely quoted from Mr. Hancock's recent Essay on Hernia.

Our readers will have perceived that Mr. Hancock strenuously advocates the opening of the sac; and that he carries out his opinions in his practice; but views of an opposite kind are held by other hospital surgeons, whose cases we have an opportunity of observing; and we think it our duty to record cases illustrative of both lines of practice, without any particular leaning or choice, as they happen to come under our notice; leaving it to the surgeons who peruse the "Mirror" to draw their own conclusions.

Mr. Lloyd has, from a very early period, advocated the opinion that it is advisable, in cases of strangulated hernia, not to open the sac, concurring herein with Mr. Aston Key, Mr. Bransby Cooper, Mr. Luke, Mr. Gay, &c. Three cases have lately thus been treated in Mr. Lloyd's wards, and we now desire to put the same upon record. The notes were carefully taken by Mr. Francis R Hall, one of Mr. Lloyd's dressers.

Case 1.—*Strangulated Oblique Inguinal Hernia.*—Charles W——, aged fifty-one, a strong healthy-looking man, and a carpenter by trade, was admitted March 23, 1851, under the care of Mr. Lloyd, suffering from a strangulated scrotal hernia of the right side. The tumour is firm, pyriform, and occupies the greater part of the scrotum; it has a well-defined neck, which is clearly traced as far as the situation of the internal ring, near which locality the patient complains of pain. A very slight impulse is felt when he coughs violently; the integuments covering the tumour are in a healthy state, but the testicle cannot be found. The abdomen is not distended, but griping pain at the lower portion of that cavity is complained of; the tongue is slightly furred and moist, the patient is thirsty, and the bowels were slightly moved at seven in the morning on the day of admission; pulse 84, rather full.

The hernial protrusion has existed for five years, during the last four of which the patient, upon the advice of a surgeon, had worn a truss, and been careful as to constipation. He was in the habit of returning the hernia himself when it came down, this happening but seldom, until some months ago, when a large protrusion took place, which he was unable to return, but the reduction was effected by a surgeon. On the morning of his admission, the patient experienced, before getting up, a sensation in the groin which made him think that the hernia was protruding, but upon examination he found that this was not the case. Shortly afterwards he had a slight motion, the tumour then came down, and has since that time been increasing in size.

Mr. Lloyd saw the patient in the evening, and determined to try the taxis with the assistance of chloroform. The hernia, however, resisted reduction, and no further time was lost in attempts to reduce by taxis, but the operation at once resorted to. Mr. Lloyd made an incision about two inches in length over the neck of the tumour; several layers were successively divided, and the sac reached. The seat of the stricture was now found to be situated in the sac, and about half-an-inch from the internal ring appeared a furrow where the tumour, on being pushed towards the abdomen, stopped. Mr. Lloyd carefully divided some tendinous bands which also constricted the sac, and after these measures the tumour was easily reduced, without the sac having been opened. The external wound was closed by sutures, a pad and abdominal bandage applied, and the patient removed in very good condition.

Mr. Lloyd ordered five grains of calomel and one of opium, to be taken at once. The bowels were moved soon after the operation. The patient passed a pretty good night; but febrile symptoms appeared on the next day, with pain in the lower part of the abdomen, for which an opiate was administered. On the second day pain in the wound was complained of, this being principally caused by cellular inflammation, which had occurred under the pressure of the bandage. Strips of adhesive plaster were substituted, and lead lotion applied. As the tongue was rather furred and dry, the skin hot, and the pulse 104, full, Mr. Lloyd prescribed ten grains of nitrate of potash, with a drachm of compound camphor tincture, to be taken in an ounce of almond emulsion, in order to allay the irritation of the mucuous membrane of the intestinal canal.

The bowels were again freely moved on this day, and the patient was progressing in the most satisfactory manner, when he was attacked by pleurisy. Mr. Lloyd's attention was now directed to the alleviation of this pectoral complication. The usual means were resorted to with success, though some fluid accumulated in the cavity of the pleura. This, however, became gradually absorbed, and the patient soon regained complete health. No unfavourable symptom followed upon the operation for strangulated hernia, the wound healed well, the bowels remained very regular, and the patient was quite convalescent of the pleurisy one month after his admission, the recovery from the operation having rapidly progressed.

Case 2.—*Strangulated Oblique Inguinal Hernia.*—William H. B——, aged 50, a healthy man of good constitution, was admitted March 26, 1851, under the care of Mr. Lloyd, with a strangulated inguinal hernia on the right side, which had descended into the scrotum. The tumour was found of a pyriform shape, as large as a cocoa-nut, and fully distending the scrotum; its neck could be traced upwards towards the situation of the internal ring, but a constriction existed at the external outlet, as here a band could be felt tightly encircling this part of the tumour. The latter was very firm and unyielding, and felt like cartilage, the slightest handling gave exquisite pain, and no impulse was noticeable in any part of the protrusion, when the patient coughed vigorously. The testicle on the sound side projected from the surface, but on the affected side that organ could not be detected.

The patient's countenance was pale, emaciated, expressive of great anxiety, and he complained of severe pain in the lower portion of the abdomen, especially on the right or affected side. No distention nor tenderness on pressure was, however, noticed: there was much thirst, the tongue was furred and dry, but the skin cool. Pulse 96, sharp and full. The bowels were slightly moved on the day before admission, constipation having existed for the six previous days.

On being questioned, the patient stated that the hernia had existed five or six years; it had generally been about the size of a hen's egg, and had never before occupied the scrotum. The tumour was always easily reducible; a truss had been worn for several years, but this precaution had been neglected the last twelvemonth. An hour before the patient's admission, whilst he was undressing, the tumour suddenly came down and assumed at once the size which it subsequently presented, though it gradually became harder and more painful.

Mr. Attfield, the house surgeon, applied the taxis after the patient had been made faint by a warm bath: but reduction, after ten or fifteen minutes' trial, could

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not be effected. Mr. Lloyd therefore proceeded at once to operate. After the patient had been rendered insensible by chloroform, Mr. Lloyd made a longitudinal incision, two inches in length, over the neck of the tumour, in the situation of the external ring, and having exposed the sac, found it firmly constricted by strong fibrous bands (probably inter-columnar) which were carefully divided, though with some difficulty, as they were very tense. After this stage of the operation, the contents of the sac were pushed up and reduced with a gurgling sound.

The treatment was analogous to that of the first case, with the exception of purgative enemata, which were administered, one on the day of the operation, the other on the following. The evacuations soon became plentiful, no unfavourable symptoms occurred, and the patient was quite well one month after admission.

Case 3.—*Strangulated Femoral Hernia.*—Frances L——, forty years of age, a married woman of habitual weak health, was admitted, April 8, 1851, under the care of Mr. Lloyd, affected with a strangulated femoral hernia of the left side. The tumour is of a large size and situated entirely below Poupart's ligament; it extends down the upper part of the thigh, and appears to protrude from the saphenous opening. The swelling is firm and resisting; some impulse is communicated to it by coughing, and the skin covering it is distended and red. The countenance is anxious, the abdomen slightly distended, the tongue furred, the skin dry and hot, and the pulse 109, small and jerking; there is nausea, but no vomiting.

The patient states that she has never enjoyed good health since she first perceived a hernia on the *right* side, now about fifteen years ago. The tumour, from suddenly assuming a large size, had been difficult of reduction three different times; it was, however, each time replaced by a surgeon. On a fourth occasion the same practitioner could not succeed in reducing, and the patient was admitted into St. Bartholomew's Hospital under the care of Mr. Lawrence. An operation was then performed with complete success.

It was, however, on account of another hernial tumour on the *left side*, as above stated, that the patient was now admitted; this hernia had existed about twelve years; difficulty of reduction had only occurred once, viz., two years ago, when the tumour was replaced by the taxis. It had come down again since that time, but was of small size, and the patient was able to return it herself until a twelvemonth ago, when it began to cause her some inconvenience. The tumour has gradually increased in size, and for the last two months she had not been able to return it.

On the evening of the patient's admission her truss suddenly broke as she was stooping; the hernial tumour instantly increased in size, and being unable to return it, she applied to the hospital. Taxis, aided by the warm bath, failed to replace the hernia, and Mr. Lloyd therefore proposed an operation, which was performed in the usual way without opening the sac, whilst the patient was under the influence of chloroform. The stricture was situated at Gimbernat's ligament, and very tense; but it was divided without difficulty.

After the operation five grains of calomel and one of powdered opium were administered; vomiting occurred during the night, but the bowels were opened twice. When, on the third day, the pad and bandage were removed, an erysipelatous blush was noticed about the wound; it was confined to the left side, and mounted above Poupart's ligament; the abdomen was painful and distended, and febrile symptoms present. Mr. Lloyd directed twelve leeches to be applied to the iliac region, and small doses of mercury with chalk and opium to be taken every fourth hour. On the fourth day the symptoms were aggravated, the wound was suppurating, and some air noticed to escape from it.—The leeches were repeated, a poultice applied, and the patient ordered small doses of calomel and opium.

On the fifth day a few bubbles of air continued to issue from the wound; the erysipelatous blush and pyrexia continued unabated; abstraction of blood by leeching was therefore again resorted to, and the patient ordered to take jelly. From this time the symptoms became less severe, the improvement continued, and about eighteen days after admission the wound began to close; it looked healthy, and the patient was gaining strength.

It will at once be perceived that the foregoing cases illustrate in a very distinct manner the immense advantage of operating early; in none were the symptoms very distressing; in none were they very urgent, but as soon as gentle taxis had failed, Mr. Lloyd operated without waiting until the constriction had caused inflamation and its consequences, without torturing the bowel by repeated manipulations, and without weakening the patient by tartar-emetic, tobacco, &c.

Whether the sacs not having been opened had much influence on the favourable results would be difficult to determine; it may, however, be supposed that one incision less was perhaps more favourable to the patients than the reverse. We should, however, not omit mentioning that it has been the practice of Mr. Lloyd since the publication of his paper in the *Medical Gazette*, now thirteen years ago, in which he supports Petit's operation, to treat all the cases of hernia which came under his care, and in which it was feasible, by the same method—viz., refraining from opening the sac.

We shall conclude by quoting from Mr. Gay's work on femoral hernia, a passage of Petit's book, where he answers the objections which were brought forward in his time against his operation: "It is objected that the operation is difficult with the director, which is peculiar to myself; there is not a surgeon who could not perform it with ease, however little dexterity he may possess; but the difficulty of a thing is not the question when it is useful and practicable.

"It is said that fluids are found shut up in the sac, which are returned into the cavity of the abdomen, where they may produce mischief; but I will ask those who make this objection, would they not, if they had reduced the tumour without operation, have returned it with the fluids which were contained in the sac, &c.?" He finally says, "my opinion is, that with the exception of a gangrenous hernia, those in which the intestine is loaded with scybala, and some of those in which the intestine contains a foreign body, all others may be treated without opening the sac; there are some even which ought not to be treated in any other way."

Among the advantages of Petit's method, Mr. Key reckons "the less exposure of the vessels to danger, and the avoidance of hæmorrhage into the abdominal cavity in case an errant vessel should be wounded; the diminished risk of accidentally wounding the intestine with the knife, or of rupturing a portion of the bowel that might have undergone the ulcerative process from the pressure of the constricting band, a result which sometimes happens from drawing the bowel from under the stricture, in order to bring it into view. Again, collections of pus, which have been found at the mouth of the sac, attended with intestinal irritation and peritonitis, are not so likely to occur, if the sac be allowed to remain entire." (Gay on Femoral Hernia, p. 70.) We would refer those who are disposed to hear both sides of the question, to Mr. Hancock's Essay, where the opening of the sac is skilfully advocated.

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UNIVERSITY COLLEGE HOSPITAL.

Excision of the Elbow-joint.

(Under the care of Mr. Erichsen.)

Our readers will doubtless have perceived that we are very anxious to collect well-authenticated facts, as offered by the practice of the hospitals of London, bearing upon certain methods of treatment which are not yet fully acknowledged and adopted by the profession at large. Among these, excision of joints holds a prominent place. We have now another case to add to the list, one well calculated to encourage surgeons in having recourse to excision rather than to amputation, for the result has been extremely favourable.—The notes of the case were taken by Mr. Mitchell, one of Mr. Erichsen's dressers.

Joseph T—— was admitted into University College Hospital, under the care of Mr. Erichsen, on December 6, 1850. He is a stout healthy-looking man, thirty-one years of age, married, and an ostler by occupation.—About five years ago, he severely sprained his right arm whilst stopping a horse; a good deal of swelling soon came on, and it gradually extended up to the elbow. Ever since this, his hand has felt weak and numb. In May, 1849, a swelling appeared on the inner side of the right elbow, about opposite the inner condyle; it was painful, and slowly increased in size up to Feb., 1850, when it was opened, and nearly half a pint of thick, curdy matter escaped. Poultices were applied to it, and there has been constant discharge from the opening ever since. In May, 1850, the arm not getting better, he was admitted into the London Hospital, where the arm was first poulticed, and then bandaged.

At present, the right elbow-joint and the parts around are considerably enlarged; the swelling extending from about the lower third of the arm to the upper third of the forearm. The arm is bent at an obtuse angle, and is capable of about ten degrees of motion. The hand is fixed in a prone position. At the back of the elbow-joint, and over the condyles, especially the outer one, the skin is tense, and slightly tender on pressure. The principal swelling is observed at the sides of the joint, over the condyles; the olecranon can be distinctly felt, as well as the continuity of the ulna; but the lower end of the humerus is completely obscured.

On the inner side of the limb, about an inch and a half above the condyle, there is a narrow aperture into which the probe enters, and from this sinus there appear to be fistulous tracts extending in two or three directions; the probe passes along one, which seems to go across the joint, for the distance of some four inches. Many small pieces of bone have at different times come away through this aperture.

On handling the diseased limb, more pain is felt between the outer condyle and the head of the radius, than at any other part, the pain being most severe at night. The patient always supports the diseased arm in the left hand, being unable to bear the weight of the arm from the elbow. He cannot reach the top of his head, or execute any movement with the forearm.

MEASUREMENTS.

Right arm.	Circumference.
At the bend of the joint	12½ inches.
Two inches below "	10¼ "
" above "	9¾ "
Left arm.	**Circumference.**
At the bend of the joint	10½ inches.
Two inches below "	10¾ "
" above "	10 "

As there was some heat and irritation about the joint, Mr. Erichsen directed that the patient's bowels should be kept open. Iodide of potassium in decoction of sarsaparilla was moreover prescribed, and a succession of blisters were to be put over the joint, the latter being supported by a leather splint.

A fortnight after admission, the limb was much diminished in size, but there was still considerable discharge. A caustic issue was then applied to the outer aspect of the elbow-joint. On the twenty-fourth day, the arm was much in the same state. Three small pieces of bone came away by the upper opening.

The patient stated that he was less able to use it than ever. Mr. Erichsen therefore decided to operate, as the man was in a good state of health.

One month after admission, the man having taken chloroform in the adjoining ward, was removed to the operating theatre, and placed on the table; his arm being held in a semi-flexed position, with the elbow turned upwards. Mr. Erichsen then made a longitudinal incision on the radial side of the ulnar nerve, extending from about two inches above, to about two inches below the joint. A transverse cut was then carried in a direction outwards from the centre of this incision, and the flaps dissected up on the inner side, including the ulnar nerve with the soft parts, turning them over the inner condyle; the olecranon was then removed with a pair of cutting forceps, and the joint opened by forcibly flexing it.

The soft structures entering into the composition of the joint were found extensively diseased, and some bands of fibrous tissue stretching across the articulation. The articular surface of the ulna and the head of the radius were next removed, and lastly, the articular end of the humerus was sawn off. Mr. Erichsen took especial care to remove only those portions of bone which entered into the formation of the joint, and in no way to encroach upon the shaft. Five arteries required the ligature, and the wound was dressed with wet lint.

At six P. M., Mr. Erichsen came to the hospital. The flaps were then brought together by means of sutures; the arm being supported on pillows, in a semi-flexed position. An opiate was administered, and the patient passed a good night.

Examination of the Joint.—The cartilages of incrustation of the ulna, radius, and humerus, were found to have been almost entirely removed, and a quantity of greyish-brown, fibrous-looking tissue deposited in their place. Bands of this tissue also stretched across the joint, between the ulna and humerus. The diseased articular surfaces were minutely examined by Dr. R. Quain, under whose care the patient had formerly been. On a section being made, vertically, through the reddish-brown, pulpy substance into the subjacent bone, it was found that the pores or cells of the cancellous osseous structure were filled with oil-globules, and surrounded by bone-tissue, showing the usual lacunæ and bone-corpuscles. As the diseased surface was approached, these laminæ and corpuscles became less distinct; and still nearer, the cells in the bony tissue appeared to be surrounded merely by a kind of fibrous tissue in which irregular particles of bone were observed. These particles were elongated, irregular in form, and rounded off at the angles, resembling somewhat crystals in a state of solution.

At the diseased surfaces the places of the cartilage and synovial membrane were occupied by a fibrous texture, abounding in cells larger than pus cells, spherical, nucleated, and granular. Irregular masses of cartilage, resembling the bony particles already mentioned, appeared in this fibrous tissue. From the examination of this specimen, Dr. Quain was led to infer that "pulpy thickening of the synovial membrane" is a fibro-cellular degeneration of that membrane, and of the subsequent cartilage and bone, the morbid process being evidently connected with some imperfection in the nutrition of the joint, doubtless originating in inflammation.

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Mr. Erichsen has found a similar fibro-cellular degeneration of synovial membrane and cartilage of incrustation in several instances of disease of the phalangeal articulations of the fingers and toes.

Seven days after the operation, all the ligatures but one had come away; the wound looked healthy and granulating fast. Twenty days after the excision, the patient began to raise his hand, and touched his head, which is more than he has been able to do for twelve months before. The arm was bandaged above and below the wound, and the splint secured, so that the dressings could be applied without its removal. Seven weeks after the operation, the wound had almost healed up, and no fragments of bone had come away. At this time the patient was made an out-patient, his arm being well supported by a leather splint.

Since that time—viz., Feb. 21, 1850—the patient has progressed most favourably. The arm was kept nearly extended until cicatrization was complete; it was then gradually brought into an angular position, by altering the splints from time to time. In this way the uniting medium between the bones was not elongated too suddenly, so that firmer union might result.

The patient has now an extremely useful limb; the cicatrization of the wound is complete, a small sinus that remained open for some time having closed. He can extend and flex the forearm, can use his hand for all ordinary purposes, and easily lift a considerable weight, such as a chair or coalscuttle. The muscles of the upper arm, which had become partly atrophied by long disuse, are regaining their normal bulk, and the patient will be enabled to follow his former occupations.

The extent of the foregoing report will not allow of any remarks; we shall therefore merely allude to statistics which we found in a review of Professor Blasin's work on "Operative Surgery," in the *Medico-Chirurgical Review*, April, 1851:—"The author has examined all the published cases of this operation he could collect, in order to determine under what circumstances anchylosis might be expected to follow it. He has drawn 36 cases from English and American authors, 27 from France, 26 from Germany, and 1 from Italy; in all, 90 cases. Death was the result in 10 cases; in 2 caries returned; in 8 the event is not recorded. Of the remaining 69 cases, a new joint was formed in 41; in 7 anchylosis took place; in 21 no information could be collected on this point. In 24 successful cases, of 28 partial resections of this joint, 6 were cured with, and 10 without, anchylosis; the remaining cases uncertain. Thus the probability of anchylosis is greater after partial than after total excision of the elbow-joint."

ST. THOMAS'S HOSPITAL.

Gangrene of the Forearm following upon a Comminuted Fracture of the Humerus.

[Under the care of Mr. Simon.]

In the numerous cases of comminuted fracture of the superior or inferior extremities, which so frequently meet our eye in the hospitals of London, we have seldom noticed the complication mentioned in the heading of this report. Disease of bone, formation of abcess, erysipelas, severe traumatic fever, sloughing, &c. &c., are but too often the sad attendants upon such fractures, and the occurrence of these is a matter of such daily observation that cases in illustration are not needed. But injury to the arterial system of the part, sufficient to suspend the supply of blood, and give rise to gangrene, is an event which fully deserves to be recorded.

The situation in which the surgeon is placed under these circumstances is not devoid of perplexity, for he has, as it were, two enemies to combat at the same time, and the tactics to be used against the one are not the same as those best fitted for the other. The report of this case will afford a good illustration of the practice of hospital surgeons when they have to treat complications of this nature; we shall soon have an opportunity of rendering such illustration still more complete, as two cases of a somewhat analogous description have lately been treated in another metropolitan hospital, an account of which we shall not fail to present to our readers. The following report is based upon the notes kindly furnished by Mr. Charles Chaldecott:—

Charles H——, a stableman, about forty years of age, was admitted, October 25, 1850, under the care of Mr. Simon. He had just sustained a comminuted fracture of the right humerus, by falling from an omnibus. The injured arm was tightly put up, in the usual way, with roller and splints. The shock of the accident was not considerable; the pulse at the right wrist was, however, very feeble. Five days after admission, the pulsations of the radial artery of the affected arm had entirely ceased, and it was found that the patient could not move his fingers, and had completely lost the power of feeling in the right hand. The latter was, however, still warm and moist; but the next day it turned cold, and assumed a blue colour. The patient now began to complain of a burning pain, referred to the palm of the hand.

For three or four days it was noticed that the blood was not coagulated in the capillaries, for the pressure of the finger could empty them, and they refilled on its removal. The temperature of the hand was now getting lower, and the colour darker, but the gangrene remained confined to that organ. Mr. Simon marked with ink the boundary of sensation, and not the slightest advance of the disease was subsequently made beyond that limit.

For about an inch or a little more, however, above this, and encircling the wrist, a white band was perceived, presenting a very curious appearance, in the contrast of its paleness with the leaden hue of the dead parts below and the red colour of the inflamed portion above. This appearance lasted for several days, but gradually disappeared, and the redness of the forearm steadily advanced towards the line marking the cessation of sensibility. When that line was reached, some small vesications appeared around the wrist, which soon burst, and ulceration commenced. These changes were effected in the space of about five weeks, and the patient's health did not suffer materially all this time. As long as this was the case, Mr. Simon was anxious to defer the removal of the hand, in the hope that the fracture of the humerus might unite, as thus greater facility would be afforded for the performance of amputation. It was evident that the comminuted fracture of the humerus could hardly fail in being disturbed during the operation, this circumstance having the tendency of adding considerably to the suffering and constitutional irritation of the patient. But before union was accomplished, the man's general health began to suffer towards the 1st of December, being about five weeks after admission, and amputation was consequently decided upon, and performed one week afterwards.

The sheaths of the tendons were filled with pus, and the muscular substance of the stump was soft and unhealthy. Mr. Simon made his flaps as near the line of separation as he could; there was very little hæmorrhage, the radial artery alone required a ligature, the ulnar and interosseous being completely blocked up. Chloroform was administered during the operation, but its full effect was not induced, as Mr. Simon thought that in all probability the patient had diseased arteries.

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The healing of the stump went on very slowly, though a full allowance of wine was prescribed; portions of tendons and muscles sloughed away, and matter burrowed along the bones. On the inner side a plugged-up vessel was noticed, which was supposed to be the obliterated ulnar artery. There was a great deal of pain in the stump, the uneasiness being principally referred to the absent fingers: Mr. Simon ordered a solution of chloride of soda to be injected into the stump daily. At one time, about three weeks after the amputation, the sinus up to the elbow seemed to be deeper and larger, the ulna and the inner surface of the radius became quite denuded for the whole length of the tract, and compresses were applied all the length of the forearm to diminish the cavity. The wound at the same time emitted a very unpleasant smell, the sinuses at length began to granulate, and the wound cicatrized. The union of the fracture was likewise slow in acquiring firmness, but this was at last obtained, and the patient left the hospital quite well.

It appears extremely likely that the failure of the circulation in the hand was owing both to a morbid state of the arteries and to direct violence on the part, through which a certain amount of nervous lesion was experienced. That the comminuted fracture of the humerus had a share in the occurrence of gangrene may easily be admitted, for the arterial as well as the nervous system were very likely to suffer both from pressure and inflammation. It will have been observed that the radial artery required tying, but that the ulnar and radial were quite blocked up. Had the patient's health allowed of the hand falling off naturally, the radial would very probably have been likewise obliterated.

The most complete natural amputation of the foot just a little above the ankle joint, occurred a short time ago, without any hæmorrhage, in a patient of Mr. Lloyd, at St. Bartholomew's hospital. It was a case of senile gangrene, and the foot dropped off, leaving a granulating stump, which eventually did extremely well. The arteries were so prone to ossification in this case, that bony deposit could be felt in the radial artery at the wrist.

Dislocation of the Femur on the Dorsum Ilii in a Child six years old.

(Under the care of Mr. South.)

Although the rules laid down for distinguishing fracture from luxation are extremely useful, and will in general enable the surgeon to establish a satisfactory diagnosis, cases occur where the age of the patient produces some difficulty. We are accustomed to look upon the aged as obnoxious to fracture, adults to dislocation, and children to bending or fracture. Yet we now and then find that articular displacements, under certain circumstances, (independently of congenital luxations,) take place in very young subjects. Mr. South, for instance, had to treat, a short time ago, a case of dislocation of the hip-joint in a little girl of tender age, and we think we are serving a useful purpose in putting the same upon record.

A. B——, a little girl six years old, was brought to the hospital, May 1, 1851, and placed under the care of Mr. South. This young patient had been knocked down by a cart filled with empty barrels, ten days before admission, and one of the wheels of the vehicle was said to have passed over the pelvis. On examination, a patch of ecchymosis was found over the right trochanter major, and a wound through the skin, an inch in length, at the right side of the perinæum. The signs of a dislocation of the right femur on the dorsum ilii were well marked; the head of the bone could readily be felt; the knee was much inverted, and the foot turned, so that the great toe rested above the left instep.

The symptoms being so distinct, Mr. South proceeded to reduce the luxation in the following manner:—The pelvis being fixed with a strap, the limb was extended, and after about a minute's steady effort, a harsh grating was felt, as if the head of the bone were passing over a broken portion of the acetabulum; but there was no snap or jerk, as of the bone falling into its socket. The dislocation, however, was found to have been reduced at the moment the crepitus was noticed. The little patient was soon well enough to return to the country; and the report, three weeks after the reduction of the dislocation, was, that she could walk very well for a short distance, and was daily getting stronger in the part.

As the interest which this case presents lies principally in the age of the patient, we were naturally led to inquire whether dislocation of the hip had occurred in subjects as young or younger than the present patient. We find, from a report of the London Hospital, that a luxation of the femur on the dorsum ilii was reduced by the late Mr. Andrews, in a little girl five years and nine months old. The symptoms are thus described:—"When the child stood upright, the left leg was found shortened to the extent of an inch and a half, the knee and foot being inverted, with the toes resting upon the instep of the opposite foot. The dislocated limb could be bent across the other thigh, and the head of the bone could be plainly felt on rotating it on the dorsum ilii." It will be perceived that these symptoms present much analogy with those which were noticed in Mr. South's patient. "The accident (according to the mother's account) was the result of the child falling off a chair with the leg bent under her." This little patient did likewise extremely well after reduction.

The reporter of the case, Mr. Stewart, observes that the case treated by Mr. Andrews is the youngest on record, Sir A. Cooper having alluded to a well marked dislocation in a patient seven years old; but it would appear from a case some time ago under the care of Mr. Stanley, at St. Bartholomew's Hospital, that luxation of the femur may occur within the first twelve months of life, as Mr. Stanley reduced a dislocation of that kind in a little patient close upon *one year old*.—There was no evidence in Mr. Andrew's or in Mr. South's patient of any disease tending to facilitate luxation; the children enjoyed good health both before and after the accident, and we may look upon it as a well-authenticated surgical fact, that dislocation of the femur on the dorsum ilii may occur at a very early age.

Congenital Phimosis, with nearly Imperforate Prepuce.

(Under the care of Mr. Dixon.)

A patient about fifteen years of age presented himself to Mr. Dixon, May 24, 1851, with a congenitally phimosed prepuce, the aperture in the latter being hardly of sufficient dimension to admit a punctum probe. Micturition had always been very imperfectly performed, as the urine accumulated in the preputial bag and could not be voided through the minute opening, except the patient forced it out by kneading the prepuce. In this manner the bladder had been emptied as long as the boy could recollect, and he now wished the congenital defect to be rectified.

Mr. Dixon, a few days after the patient's admission, performed circumcision in the usual way, and thus procured great comfort to the boy, who was extremely pleased at being able to empty his bladder by a less tedious and annoying process than he had hitherto been obliged to use.

A case of an analogous nature was treated several years ago in St. Thomas's Hospital. Here the defect had been allowed to remain up to manhood; micturi-

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tion was performed in exactly the same manner as stated above, and the imperfection was still more important, as the patient was married, and had never had any issue. Circumcision was performed with the most satisfactory results.

Being on the subject of congenital defects of the penis, we may state that the diagnosis of these imperfections is not always easy, and that the surgeon might fall into error as to the exact seat of the defect, were he not to examine the parts with the greatest care.

ST. GEORGE'S HOSPITAL.

Encephaloid disease of the Femur; Amputation; Recovery.

(Under the care of Mr. HENRY CHARLES JOHNSON.)

WHICH is the final cause of malignant transformation in the structures of the human frame? How does it come to pass that changes of a destructive and contaminating nature take place in a limited portion of the body, while healthy nutrition is carried on in other parts? Why does encephaloid disease, a morbid alteration so widely distinct from any of the events of ordinary inflammation, attack the young in preference to the old? How can we explain that bone is so frequently the seat of this terrible affection? These questions naturally suggest themselves to the surgeon when pacing the wards of our hospitals, where he so frequently meets with instances of osteo-cephaloma; and he is the more anxious to find an answer to them, as such knowledge would lead to the practical application of prophylactic measures. Much obscurity, however, still reigns as to the points just named, and a wide and useful field is, in this respect, opened to persevering inquirers.

Until the veil is partly withdrawn, the attention of the surgeon may, however, be very advantageously occupied by rendering the diagnosis between malignant and non-malignant growths more and more accurate. It is satisfactory to note how much has been done in this respect by Cruveilhier, Carswell, Dupuytren, and the modern school of microscopists; and how near to certainty we may arrive by the careful watching of the symptoms. By the study of the latter, pretty correct distinctions may now be made between exostosis, enchondroma, osteo-cystoma, osteo-sarcoma and osteo-cephaloma; but among these affections, the differential diagnosis most frequently required is, between osteo-sarcoma and osteo-cephaloma, the distinction being of the most vital importance to the patient.

And here we would refer the reader to a list of ten distinctive characters given by Professor Miller in his Principles of Surgery (second edition, p. 484,) between the two last-named diseases, a list not less practically useful than creditable to its author. It is a pity, seeing how clear and easy of comprehension are the Greek appellations used for these affections, that the French surgeons should use the word "osteosarcôme," for *malignant* disease of bone; much confusion results from this. The same may be said of the meaning of fungus hæmatodes on both sides of the Channel.

When the diagnosis is satisfactorily established, comes the question of operating or non-interference. We conclude, on this head, from the practice of the London hospitals, that surgeons are in general willing to operate, provided the disease be not too far advanced, the chances against the return being, of course, greater, the less time the patient has suffered from the disease. We must say that examples of the recurrence of malignant disease, either in the neighbouring absorbent glands or other parts of the body, not unfrequently meet the eye in our metropolitan institutions. Still some escape for years, or are entirely freed; and even with those who are again visited, is it not of some importance to procure for them months and years of comparative comfort? (See, for views differing from these, Mr. Holt's cases at the Westminster Hospital, THE LANCET.)

We mentioned a short time ago an instance of recurrence of encephaloid disease of the femur at St. George's Hospital, under the care of Mr. Hewitt; we have now to report a case of an analogous nature lately operated upon by Mr. H. C. Johnson at the same hospital. The patient is about twenty-four years of age, unmarried, of a nervous temperament, and was employed as shopman at a tobacconist's. No disease of a malignant character has existed in his family, and he has himself been suffering only for the last eighteen weeks. When admitted, Jan 25, 1851, under the care of Mr. H. C. Johnson, the patient looked ill and cachectic, with a pulse of 104, though up to the time when his knee became the seat of pain, he had enjoyed very good health. He presents on the left thigh a tumour occupying the whole distance between the knee and lesser trochanter posteriorly, giving the limb the appearance of about twice the size of its fellow. The skin is tense, but not inflamed; the tumour tough, though somewhat yielding to pressure; it is rounded in form, and occasions a great deal of pain. The patient gives the following history:—

About eighteen weeks before admission, he felt some pain in his left knee, though not aware of having struck or injured the joint in any way. This continued for about a fortnight, when he awoke one morning with a more severe pain in the affected knee, and found the part swollen to nearly the size it now presents. The patient contrived, in spite of his sufferings, to attend to his occupations for five or six weeks after this, but the pain soon obliged him to keep his bed. During the whole of this period, no regular advice was obtained, but he was treated by his friends, who applied a great number of poultices, both of herbs and bread.

Getting, however, no better, he came to London for advice. The surgeon under whose care he placed himself used leeches, blisters, poultices, &c., and punctured the tumour twice with a grooved needle, and once with a lancet, when about an ounce of blood exuded.

When admitted into the hospital the malignant nature of the disease was ascertained, and as the affection was not of long standing, Mr. Johnson resolved to amputate the thigh. The only question was, whether the operation should be performed at the hip-joint, or close to the lesser trochanter. It was thought advisable, on consultation, to amputate in the continuity of the bone.

The patient was brought into the theatre a week after admission, and having been narcotized by chloroform, Mr. Johnson amputated the thigh, just below the lesser trochanter, with as much rapidity as was consistent with safety, in order to avoid the loss of blood, since the hæmostatic means were naturally limited to compressing the femoral artery with the finger in the groin. The flap operation was preferred to the circular method for the same reason, and the patient lost comparatively little blood.

A longitudinal section of the thigh-bone and tumour was made immediately after the operation, and the pupils were shown at once the structure of the growth. It was now seen that the latter was principally connected with the femur, the knee-joint being quite unaffected; the tumour was about the size of the head of a child five years old, enveloped in a dense capsule, studded here and there with sanguineous nodules; the medulla seemed sound, with the exception of a few dark spots about two inches above the knee, and Mr. Johnson mentioned, in the remarks he made, that the bone appeared sufficiently sound to allow of the hope that amputation in the continuity of the limb would be a

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permanently useful measure. The interior of the tumour presented the usual characters of encephaloid growths.

When the preparation had been kept for a little while in the museum, it was evident that the femur, for its two lower thirds, was surrounded, and, as it were, tightly enbraced by the tumour; the bulk of the growth, which seemed to spring principally from the periosteum, lay posteriorly, and the medullary canal was evidently diseased. In the same museum we were kindly pointed out another preparation, illustrating medullary disease in a very early stage. The tumour, the size of a small melon, is attached to the inner part of the tibia, the bone not partaking in the diseased condition; the tumour is very regular, smooth, and compact. The amputation was performed by Mr. Hawkins above the knee, and very early in the disease; it is then likely that no return will be experienced; none has been reported, and the operation was performed eight or nine years ago.

Mr. Johnson's patient had several attacks of severe hæmorrhage; the loss of blood was, however, stopped by pressure and cold. At one time the stump looked as if phagedænic ulceration was on the point of setting in, and the powers of the young man were at a very low ebb; he was of course given abundance of stimulants, and Mr. Johnson ascribes the favourable turn which the case eventually took to scruple doses of chlorate of potash, under the use of which he improved in a remarkable manner.

On March the 14th, being about seven weeks after admission, the patient was discharged with a good and firmly cicatrized stump It is to be hoped that no recurrence of the disease will take place, and this expectation is somewhat justified by the case of a gentleman operated upon six years ago by Mr. Johnson for a disease of a similar description. Here the cancelli of the bony texture were involved, (which circumstance was not discovered in the present patient,) and yet no recurrence of any kind has taken place.

That the femur is a bone especially liable to the above described disease seems evident, if we consider that the case just reported, and those of Mr. Hawkins, Mr. Hewett and Mr. Charles Guthrie, occurred within a comparatively short period. Besides these, there will be found in Mr. Le Gros Clark's edition of Dupuytren's "Diseases of Bones," (Sydenham Society,) three cases of osteo-cephaloma of the *femur*. The patients were of the female sex, respectively forty-three, fifteen, and twenty-one years of age. In the first, amputation took place, and the patient died on the thirtieth day after the operation. The tumour sprang from the lower fourth of the femur, principally the condyles, and was contiguous to the bone as far as the upper third; the tumour consisted for the most part of fibrous and filamentous tissue containing serum. The medulla was at many points almost fibrous in consistence.

The second patient died without an operation. The tumour surrounded the upper third of the thigh, and was about six inches in diameter. Its upper extremity extended as high as the capsule of the hip-joint, and its lower was continuous with the periosteum. The cancerous degeneration seemed to be formed at the expense of the bone and periosteum.

The third patient had disease of the knee-joint, besides osteocephaloma of the femur; she died in great pain. The disease was discovered to be confined to the femur; the tibia, fibula, and all the cartilages of the knee-joint, were sound. Nearly the lower fifth of the femur was converted into a white, fibro-cellular mass; some spicula of bone were scattered here and there through the structure, and constituted the only remaining traces of the femur at its lower part.

We have, however, seen, in the London hospitals, cases in which the encephaloid disease attacked, in one instance, the upper part of the humerus; and, in the other, the head of the fibula. The first patient was a little girl, seven years of age, who was admitted into St. George's Hospital, under the care of Mr. Cutler, in April, 1850. When the child was only two years old, a painless swelling was observed towards the upper part of the arm, without any known cause. This had gradually increased up to the time of admission, but did not interfere with the movements of the arm. On examination, an irregular tumour, nodulated on its surface, was felt in the upper portion of the humerus. Just below the acromion, it measured ten inches in circumference; the deltoid was flattened, and spread over the surface of the tumour; the arm bent at a slightly obtuse angle, and the head of the bone thus made to project somewhat out of the glenoid cavity. Mr. Cutler proposed to the parents to take off the humerus at the shoulder-joint, but they hesitated.

The case of encephaloid disease of the head of the fibula occurred at King's College Hospital, under the care of Mr. Partridge. The patient, a woman, thirty-five years of age, was admitted on September 1, 1850. About four years previously she had fallen from a table, since which time she had pain and slight swelling below the knee of the left leg; but this was trifling, until three months before her admission, when the pain became violent, and the swelling increased. After being treated in various ways, the tumour seemed to point; a puncture was made, but considerable hæmorrhage followed, which much relieved the pain. On examination, a large and tense tumour was found on the outer part of the leg, just below the left knee, extending nearly to the prominent ridge of the tibia in front to the popliteal space behind, and nearly halfway down the fibula on the outside. Just over the head of the latter bone, the tumour was quite hard.

The thigh was removed ten days after admission; and on inspection, the tumour was found to be lobulated, closely connected to the head of the fibula, passing between the tibia and the latter bone, and completely encircling it. Its connexion with the tibia was merely composed of areolar tissue. On a section, it was found that the growth was evidently of a medullary nature, originating in the cancellous structure of the head of the fibula, and pushing before it the outer layer of denser osseous tissue. This latter existed as a shell, encircling the root of the tumour, and then became broken up, by the expansion of the cancerous mass, into little osseous patches, dispersed through its circumference. This bony deposit formed the hard, unyielding portion perceived externally. In the centre of the medullary mass was a large collection of friable, brownish-yellow fibrine, evidently the remains of an effusion of blood, which had probably taken place at the time of the puncture. The patient went on well for a little time, but she sank about ten days after the amputation.

Lacerated Wound of the Leg; Amputation.

[Under the care of Mr. Cæsar Hawkins.]

We wish to direct attention to an assertion which was lately made by M. Guersant, Surgeon to the Children's Hospital at Paris. This gentleman stated that he had been particularly fortunate as to the results of the amputations he has had to perform upon children, owing, as he thought, to his habit of feeding his little patients well immediately or very soon after the operation. It might be said that in respect to diet much must depend on the more or less inflammatory symptoms present, and on the nature of the affection or accident which has necessitated the amputation; but M. Guersant's statement certainly embodies a valuable fact which should not be lost sight of.

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Cases of amputation of a limb in the young occur very frequently in the London Hospitals; it has, therefore, been in our power to observe the after-treatment of some of these, and in some degree test the French surgeon's opinion; we are bound to say, on the whole, that the latter is correct, for the best results were, in several instances, obtained by a generous diet soon after the operation; cases of long standing, and patients exhausted by a profuse suppuration, being of course more evidently benefited than those children whose limbs are removed for traumatic causes. In instances of the latter kind, however, we have noticed very rapid recovery, and we shall just mention two which were particularly interesting.

William H——, five years of age, was admitted under the care of Mr. Hawkins, Jan. 4, 1851, having just been knocked down by a cart, the wheel of which tore the soft parts of the leg in the following manner. From the ankle to the upper third of the thigh the skin was torn off the front of the limb; the whole length of the tibia and the anterior portion of the knee-joint were laid bare, and there was an evident separation of the muscles of both leg and thigh from one another. For the lower half of this extensive destruction, the integuments were not only hanging loose, but they had been so completely torn that the entire circumference of the limb was exposed, and the hand could be passed between the skin and the back of the knee-joint. The muscles, vessels and nerves were separated as if dissected, and were at the same time much bruised. It was found, on dissection, after the limb had been removed, that the posterior and crucial ligaments were contused, the joint slightly opened, and blood effused within it.

The shock which the system had sustained was rather severe, and Mr. Hawkins thought that the injury to the soft parts was so considerable, though no fracture of bone had taken place, that it would be hazardous to attempt saving the limb. The latter was taken off with rapidity, and very little loss of blood, at the junction of the upper third of the thigh with the middle, the patient having been rendered insensible by inhalations of chloroform. On examination, the deeper layers of muscles were found bruised and greatly separated; the gastrocnemius and soleus were completely detached from one another; there was extravasation of blood around the knee-joint, but no main artery was found wounded.

Mr. Hawkins directed that the child should have good diet, and the work of cicatrization proceeded with such rapidity that in three weeks the wound was almost closed, and in five the boy was quite well, and returned to his parents. The nourishing diet had been uninterruptedly continued from the beginning.

Some of those authors who advocate strict antiphlogistic measures support their opinion by the fact, that dangerous congestion of the viscera of the three cavities is likely to take place when a considerable portion of the frame is removed. This circumstance seems of no small importance; but it should be remembered that hæmorrhage in traumatic cases, and suppuration or exhaustion in chronic ones, act as prophylactic measures to such congestion.

We noticed the second case among the patients of Mr. Lee, at King's College Hospital. Here the little boy was about six years old, and had met with a severe fracture of the tibia and lacerated wound of the thigh, by being run over, so that it was found necessary to amputate the limb at the lower portion of the upper third of the femur. Mr. Lee acted upon the same principle as Mr. Hawkins, and the patient was likewise remarkably benefited. In the space of three weeks the wound was cicatrized by first intention, and no bad symptom whatever sprung up during the treatment.

GUY'S HOSPITAL.

Cases of Rheumatic Fever treated by Citric Acid.

(Under the care of Dr. Owen Rees.)

The treatment of acute rheumatism by lemon-juice, as introduced by Dr. Owen Rees, bids fair to take a firm footing among practitioners, as the good effects of the remedy have now been observed in a great number of instances. We reported a few cases illustrating this peculiar treatment, whilst pursuing our plan of putting upon record the various modes of treating acute rheumatism in the hospitals of London. In accordance with our scheme, we now beg to direct our readers' attention to the trials lately made by Dr. Owen Rees, respecting the action of citric acid in the same disease. When considering the beneficial results of lemon-juice, the question naturally sprung up, whether the principal agent was the citrate of potash, or the acid of that salt? Dr. Rees has now instituted a series of experiments to elucidate this question, and we beg to adduce a few cases which form part of the group.

Case 1. (Notes by Mr. Charles White.)—John D——, aged twenty-three, was admitted into Naaman ward, Feb. 12, 1851, under the care of Dr. Owen Rees. The patient is a pale, sickly young man, with light hair and complexion; he is a waiter at a tavern, has led a pretty regular life, and has, for the most part, enjoyed good health, excepting an attack, similar to the present, which he suffered two years since. Three weeks ago the patient caught cold, and a week afterwards pain began in the ankles and feet; he was under treatment for a short time, but not becoming any better, he applied to the hospital.

When admitted, he was suffering severe pain in the knee, which joint was swollen, but not red; the ankle was likewise affected. The skin is cool and moist, but profuse perspiration sets in occasionally. The pulse is 96, full, and compressible; the tongue slightly coated with white mucus; the appetite bad, and the thirst very intense; the bowels are inclined to constipation; the urine is acid, reddish, twenty-six ounces are passed in the twenty-four hours, and its specific gravity is 1026. Dr. Rees ordered one scruple of citric acid, dissolved in mint-water, to be taken three times a day.

On the third day the urine was not so acid as on the second day; thirty ounces were passed: specific gravity, 1026; pulse fuller, very compressible; the patient feels somewhat easier. Fourth day: Copious sediment in the urine; pulse 84. Fifth day: Urine quite clear; pulse 90. The patient is better, and continues to take the acid. Eighth day: Violent pain in the elbow; the other joints are easier. Eleventh day: Urine alkaline, with a coating of phosphates floating on the surface. The patient is more free from pain than he has been for some time, and has now no distinct seat of pain; pulse 96. Thirteenth day: Urine acid; the patient is not so well. He remained in about the same condition until the nineteenth day, when the urine became alkaline; there was still some pain in the joints, but the general health was better. Twenty-fourth day: Much the same, with profuse perspiration. Up to the twenty-eighth day the improvement was rapid; pain and fever had disappeared, and were replaced by paleness and debility. The patient now left off the acid, took compound steel mixture for a week, and was discharged well, thirty-eight days after admission.

The clinical clerk kept a daily and accurate account of the peculiarities of the urine. From this table we find that the highest amount of urine passed was fifty ounces in the twenty-four hours; with specific gravity, 1022, acid: this happened on the ninth day, when the patient was in great pain. The smallest quantity was twenty-eight ounces; specific gravity, 1030, neutral.

Case 2. (Notes by Mr. Hedger.)—Jane S——,

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aged eighteen years, a servant girl, was admitted into Mary ward, March 6, 1851. She is of dark complexion and dusky countenance, is constantly exposed to wet and cold, but has generally enjoyed good health. About six months ago the patient experienced a rheumatic attack, from which she soon recovered. Three days before admission, severe pain in the joints came on, and when she entered the hospital the knees and ankles were so involved that she could not move her legs; these articulations were slightly red, and exquisitely tender on pressure. The tongue is furred; the bowels confined; pulse 100, full and bounding; urine, thirty ounces in the twenty-four hours; specific gravity, 1017; lungs and heart healthy.

Dr. Rees ordered a mercurial purgative powder, and one scruple of citric acid, dissolved in mint-water, every fourth hour. On the third day, the pulse had fallen to 90, and was not so full; urine, thirty ounces; specific gravity, 1018, very acid. On the fourth day the pain was much abated in the wrists and ankles; these joints can be slightly moved; bowels not open. The purgative powder to be repeated, and the citric acid continued. Fifth day, urine, thirty ounces, very clear; the pain has quite left the wrists and ankles, but the right knee has become very painful and slightly swollen.—Urine, thirty ounces; specific gravity, 1017, acid, clear.

Up to the twelfth day she progressed very favourably, and continued the citric acid, the urine varying in specific gravity from 1016 to 1022. She now expressed herself as quite well, though feeling rather weak, and the pain and swelling of the joints had quite subsided; the bowels were regular, the tongue clean, and the pulse 86. The patient took the compound steel mixture for a week, and left the hospital, quite well, eighteen days after admission.

Case 3. (Notes by Mr. Hedger.)—Matilda R——, aged thirty-eight, admitted Feb. 14, 1851, under the care of Dr. Owen Rees; pale and anæmic; married, without ever having had children. First attack of rheumatism two years ago. One week before admission the patient got wet through, and two days afterwards she experienced pain in the loins; the knees were then attacked, and on getting worse she was admitted into the hospital. When examined, she was unable to turn in bed; the arms and elbows were red, swollen, and very painful on the least pressure. The knees were not quite so sensible, but became very bad at night. Lungs and heart healthy, but the respiration is somewhat hurried; the eyes are dull; the tongue thickly coated with a white fur; the bowels confined; the thirst great, and there is much drowsiness; pulse 86, small, and very compressible; urine, normal, acid; about thirty ounces are passed in the twenty-four hours; specific gravity, 1020.

Dr. Rees ordered a mercurial purgative powder, and one scruple of citric acid, in mint-water, three times a day. On the third day, the arms and wrists were much less painful, but the knees worse. Urine, twenty-eight ounces; specific gravity, 1021; acid. The patient now took the citric acid every sixth hour. On the seventh day, the bowels were freely moved by a mercurial purgative; the improvement became marked; urine, twenty-eight ounces; specific gravity, 1018, acid. On the ninth day, the patient expressed herself as a great deal better; the joints were much less painful; the swelling and redness had subsided; the pulse was 72; the tongue clear; the bowels open; and the skin moist and supple. The citric acid was continued; and on the sixteenth day, the patient walked about the wards, though very weak. Urine, thirty ounces; specific gravity, 1020, acid. The citric acid was now discontinued, steel-mixture substituted for about ten days, and the patient was discharged, quite well, twenty-eight days after admission.

Case 4. (Notes by Mr. Couch.)—Joseph H——, aged forty, a baker by trade, was admitted Feb 12, 1851, into Lazarus ward, under the care of Dr. Owen Rees. The patient has of late been very temperate in his habits, and experienced, two years since, a severe attack of rheumatism, though the disease is unknown in his family. From this he speedily recovered, and five weeks since, all the symptoms of acute rheumatism recurred after getting wet, and remaining all day in the bake-house in damp clothes. The right knee is the most affected joint; the elbows and ankles in a less degree; tongue furred; appetite bad; pulse 92, soft; bowels confined; urine, moderate in quantity, with a dark, muddy-looking sediment, which is dissolved by heat; nitric acid dissolves it likewise, producing effervescence; acid reaction, and ammoniacal odour after twenty-four hours; specific gravity, 1015.

Dr. Rees ordered the same treatment for this patient as for those mentioned above. On the fifth day, the bowels had been freely opened by mercurial purgative powders; the knee was not so painful, hot, or tumid, but there was tenderness over the patella, where a little circumscribed effusion is felt; pulse 78, compressible; urine, four pints and a half; specific gravity, 1011; alkaline. The patient had, between the sixth and the twentieth day, alternations of pain and ease in the joints; metastasis took place several times, and the affection proved of a very erratic kind. The bowels required now and then brisk purgatives, the patient slept badly, and perspiration was rather profuse. He continued to take the citric acid like the other patients: the urine varied in quantity from three and a half pints to four and a half, and the specific gravity from 1013 to 1010. The report was, on the twenty-eighth day, that the pain had again returned, with the troublesome itching of which he has so often complained. The disease has now become chronic.

Dr. Owen Rees observed, among the various remarks which he made to the pupils, that the urine had been observed attentively as to the quantity in the twenty-four hours, and also as to its specific gravity, his view being to ascertain whether or not the solid matters excreted by the urine increased in quantity as the patient improved. He (Dr. Rees) thought that the above cases showed that this was by no means the rule. The convalescence of these patients was more tardy than it had been with the subjects treated by the lemon-juice, instead of citric acid; and Dr. Rees thought that this circumstance may have depended either on the greater efficacy of the former remedy, or upon the peculiar state of weather which we have experienced this spring, and which has been very unfavourable to those recovering from severe disease,—he being more inclined to adopt this latter view. He (Dr. Rees) was satisfied, from the observations he had now made, that both lemon-juice and citric acid are remedies for rheumatism, when properly exhibited, and that this method of cure possesses great advantages over that by antimony, colchicum, and calomel, in all cases free from complication. The restrictions as to complications are exactly the same for citric acid as for lemon-juice.

Popliteal Aneurism; Treatment by Pressure; Deligation of the Artery; Gangrene; Death.

[Under the care of Mr. Hilton.]

Whenever we notice a case of aneurism, situated on a limb, in any of the hospitals of London, we follow the treatment with peculiar interest, for the question as to the best method to be adopted is far from being solved. Every one will agree that the safest way of arriving at something like a solution is the careful watching of the results of certain lines of treatment, and the exact observation of the nature of the complaint, as well as the peculiarities of the patient. Since we feel perfectly

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unprejudiced as to the value of compression or deligation, we are enabled to observe with an unbiassed mind, and shall have much pleasure in laying before our readers, *all* the cases which may fall under our notice. In the present state of the question, it must be apparent to those who have given it some attention, that both methods possess advantages, that neither should be undervalued, and that the skill principally consists in distinguishing the method best suited for a given patient,

As to pressure, it will doubtless become more and more clear that it should be very gradual, and that the locality chosen for applying it should, as far as possible, be such as not to include the vein. Those who are inclined to be enthusiastic about pressure should, however, recollect that cases occur where the slightest restraint is unbearable, (we shall soon have to report a case fully illustrating this point,) and that pressure, as well as the ligature, has its disasters. As an example of this fact, we would just allude to a case which was treated some time ago by Mr. Busk, surgeon to the *Dreadnought* hospital-ship. Here, as we are informed by Dr. Beith, R.N., pressure was made on the femoral artery for popliteal aneurism, and for a time apparently with success. Pulsation in the tumour had ceased; and just as Mr. Busk fancied the cure would be complete, gangrene of the limb set in, and death was the issue. The case which we have now to put upon record is replete with instructive facts, and we hasten to offer a brief sketch of the same. The notes were taken by Mr. Fuller, one of Mr. Hilton's dressers.

Hugh M——, aged forty-three, a man of spare make and nervous temperament, was admitted into Luke ward, Dec. 21, 1850. As a porter of hops, he was in the habit of straining his legs considerably. For some time past the patient has not drunk to excess, but formerly he was very intemperate, and on being closely questioned as to any blow or injury he may have sustained, nothing of the kind is discovered. One year ago the leg and ankle swelled at times, and nine months since the patient perceived a swelling like a walnut in the ham of the left leg. No attention was however paid to this symptom, until a fortnight before admission, when such sudden pain seized the patient, that he could not place his leg on the ground; and he now, for the first time, noticed a pulsation in the popliteal tumour, the latter extending from the ham to the calf of the leg. The pain has since become much worse, and includes the whole thigh and leg.

On examination, a deep-seated, soft, fluctuating, and pulsating tumour was discovered, extending from the popliteal region into the calf of the leg; it diminished in size by pressure on the femoral artery and the reverse happened when the artery, was compressed below the tumour. The usual symptoms of popliteal aneurism, including a distinct bruit, were present.

Mr. Hilton prescribed rest, an elevated position to the limb, the pain to be combated with opium, and the thigh and leg to be carefully bandaged from the toes upwards About a fortnight after admission, Mr. Hilton had an apparatus applied for the compression of the artery. It was composed of two separate instruments; the one, fixed to the pelvis, was intended to press on the artery in its course of the head of the femur; the other, applied to the thigh about half-way down, was to compress the vessel in Scarpa's space. The pulsation was not arrested by the use of these instruments, but only moderated.

The patient bore the pressure pretty well, complained only of a little cramp in the leg, and stated that the acute suffering he experienced in the limb before the apparatus was put on, was now quite removed. On the third day after the commencement of pressure, scarcely any bruit or pulsation was left in the sac, the latter was less tender and swollen, and the patient could almost straighten his leg, though he had in it a sensation of numbness and tingling.

On the fifth day he began to feel uneasy and complained of the pressure; the pain in the leg had returned, the tumour was larger and softer, and the pulsation much more forcible. On the eighth day the pain in the leg and foot was much increased, and at six in the evening the suffering was so intense that the patient could not bear the pressure or even allow the limb to be touched; the apparatus was, therefore, removed, and a drachm of laudanum administered.

Mr. Hilton now directed digitalis to be given internally, and ice to be applied to the outer side of the tumour. The ice gave much pain and was discontinued. The tumour was, however, becoming larger, and the pulsations scarcely perceptible on the inner, but more distinct on the outer side. On the tenth day after the first application of pressure, Mr. Bransby Cooper, Mr. Cock, and Mr. Hilton, held a consultation on the case, and it was agreed that the artery should be tied in the upper part of the thigh.

The operation was, however, delayed for a couple of days, as active inflammation was going on in the artery and limb. The thumb lightly pressed on the femoral artery caused intense pain, both in the course of the vessel, and the whole limb; it might thus be conjectured what distressing symptoms the ligature would occasion. The patient was placed under an antiphlogistic treatment, with purgatives, &c., and as pressure could no longer be borne, Mr. Hilton had no alternative but to tie the artery (under unfavourable circumstances) or remove the leg. The first of these measures was preferred, and Mr. Hilton put a ligature on the femoral artery, about the middle of the thigh. The coats of the vessel were found much thickened and infiltrated; the patient was at once put into a warm bed, the foot and leg comfortably wrapped up in flannel.

Half an hour passed in comparative ease, when suddenly pain of the most intense and agonizing kind in the whole of the left thigh and leg seized the patient. Large doses of opium were administered, and chloroform inhaled two different times without alleviation. Opium given continuously at last procured sleep, and the patient rested the whole night and part of the following day. The man now complained no longer of pain, but of numbness; the tongue became brown and dry, and the pulse beat 110, small and weak.

On the third day after the deligation of the artery, the pain was absent, the patient slept well, the tumour became harder, diminished in size, and the pulsations did not return. Matters went on very favourably until the tenth day, when shivering occurred, and pain arose in the foot, which was now beginning to fail in keeping up its proper temperature. Wine was now ordered, and the pain having two days afterwards become very violent in the leg and around the knee, Mr. Hilton made a small opening in the sac at its inner and lower part, and allowed three or four ounces of dark, grumous, exceedingly fœtid and purulent blood to escape.

Some effusion around the knee-joint was now noticed; a small opening was therefore made on its internal and inferior aspect; but no freeing of matter ensued. Pain and stiffness in the left *elbow*-joint were now complained of: a little more blood was allowed to issue from the aneurismal sac, and a plug of lint placed in the aperture. The patient now took as much as twelve ounces of wine a day, and though the pain in the elbow-joint diminished, it now declared itself on the shoulder, and intense heat attacked the affected leg and foot: pulse 130, irregular.

On the 1st of February, being the fifteenth day after the application of the ligature, the pain had ceased, but

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the patient was extremely depressed; the toes on the left side, with a great portion of the foot, became insensible, and of a mottled purple colour: the wound of the thigh remained stationary and the ligature firm.

On the 18th day the general symptoms were worse, the gangrene spread over the whole foot and half-way up the leg; some vesicles formed, and a quantity of bloody serum escaped from some of these. A line of separation appeared to form a little above the middle of the leg; but the patient, in spite of the stimulants which were plentifully given, became so exhausted that he died on the 22nd day after the deligation of the artery; one month after the application of pressure, and six weeks after admission.

On a post-mortem examination, pus was found in the elbow, shoulder, and knee joints. The viscera were tolerably healthy, and no ossific deposit was observed in the femoral or any other artery.

After the perusal of the foregoing case it will become evident that pressure is a very unfavourable forerunner to the ligature, and that there are patients with whom all methods of treatment, from nervous susceptibility and want of tone, fail of yielding good results. Pressure is now being tried at the London Hospital on a patient of Mr. Ward. The man is of a middle age, of a good constitution, and affected with popliteal aneurism. Mr. Ward is bestowing especial care upon the case, and has procured the new compressing instrument lately invented by Dr. Carte of Dublin. We shall watch the case with much interest, and endeavour, in reporting it, to render it practically useful to the profession at large.

Contuse Wound; Sphacelus; Natural Amputation; Tetanus; Recovery.

[Under the care of Mr. Cock.]

It is unfortunately but seldom that we have the satisfaction of seeing a case of tetanus reach a favourable issue, and it is therefore with much pleasure that we hasten to put the present instance of tetanic complication upon record. Will it open the way to the discovery of a specific? Such a hope would perhaps be of too sanguine a nature, but it should nevertheless not pass unnoticed, that quinine acted here in a very effective manner, and that in two or three other cases, reported in foreign periodicals, the same alkaloid (in large doses, however,) has yielded the best results.

We venture to express the belief that the treatment of tetanus must be chiefly empirical: pathological anatomy and organic chemistry, although so useful and indispensable in other diseases, have done very little as to tetanus, and leave much to be acquired as to our intimate knowledge of nervous diseases in general. We are therefore reduced, against our better sense, as it were, to observe facts and results, and act in accordance with these, putting the why and the wherefore entirely aside. Thus, we use quinine in intermittents, mercury in syphilis, colchicum in gout, and perhaps cod-liver oil in struma and phthisis.

But the present case, besides the tetanic symptoms, offers a striking example of one of those wonderful processes of nature in which she exerts her conservative powers in the most admirable manner, and gradually brings about the separation of a portion of the human frame, without endangering the mechanism of the rest of the economy.

W. H——, aged eighteen years, was admitted into Guy's Hospital on Tuesday evening, Jan. 28, 1851, under the care of Mr. Cock. The patient is employed in a bone-grinding mill, and caught his right forearm in the machinery the day before admission, his arm having been subject to compression for twenty minutes, confined in a small space between the flat side of a revolving wheel and the wall. The exact measurement of this space was subsequently taken, and found to be nearly two lines short of one inch. Soon after the accident, the boy was seen by a medical man, and the arm placed upon a splint, and bandaged.

On his admission into the hospital on the evening of the following day, the arm presented the following appearances:—An unhealthy-looking, jagged-edged wound, about two to three inches in length, on the outer side of the wrist, a good deal of general œdema, but no direct evidence of any fracture. Higher up, about the middle of the forearm, is a hard strip of skin, of peculiar dark colour, half an inch broad, having a very defined upper border, and extending nearly half round the circumference of the forearm. This strip has very much the appearance of tough bacon-rind, such as is often produced on the skin by a high temperature, but no history is afforded of there having been any heat concerned in the production of the injury, unless it be probable that caloric was elicited in the friction produced by the revolving wheel before the machinery was stopped. The severe character of the force applied was not explained at the time of admission; and this, taken with the otherwise general healthy appearance, and now observed diminution of temperature, scarcely led one to suppose that such an irreparable injury, as was the next day perceptible, had been sustained. The boy himself appears of tolerable health and strength; he was put to bed, the arm rested on a pillow, and hot fomentations applied. On the next day, hand and arm presented a generally mottled aspect, and it was but too evident that gangrene had taken place; the sensibility was deadened, if not destroyed, but the arm above inflamed and sensitive.

On the third day the whole forearm was in a state of complete sphacelus; the hand quite cold; and many parts of forearm completely black; no sensibility higher than an inch below the elbow, and bubbles of gas seem to be escaping from the wound. Mr. Cock divided the tense hard band of skin before spoken of by an incision, and made one or two other long ones for four or five inches from the elbow downwards. Numerous bubbles of gas escaped, with a crepitating noise, and the tight band snapped when divided, like cutting a piece of tape which has been tightly stretched. This escape of gas is remarkable, as, although the part is dead, cold, and black, yet decomposition of the ordinary form has not commenced, at least as evinced by odour. The bowels not having been opened, Mr. Cock ordered a dose of rhubarb and calomel to be taken at once; at the same time, with the view of keeping up the patient's power, stimulants were considered advisable, and therefore a daily allowance of eight ounces of wine was ordered. There was, however, no particular constitutional irritation or depression, but heat and dryness of skin, a clean tongue, and very tolerable pulse.

On the fourth day mortification did not seem to have further extended, sensibility and vascularity persisted down to the elbow, and the patient had still a clean and moist tongue; the pulse was rather feebler, but he had slept well.

Sixth day: Mortification clearly stopped. A line of vesicles has formed around the arm, between the dead part below and the living inflamed part above; it passes round the arm as high as the bend of the elbow in front, but an inch below that joint posteriorly.

Thirteenth day: Up to this date the boy has continued well, and in fact his friends think him looking better and fatter than he was before. Chloride of lime in powder has been kept sprinkled over the dead part. Ulceration has gradually progressed above the mortified tissue, so as to form a deep fissure right down to the bone, and healthy suppuration, with the

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formation of granulations, is now proceeding from the tissues above. The sphacelated mass in immediate proximity thereto has been gradually cut away. The humerus is now laid bare for two or three inches above the condyles in front, but a healthy flap covers its whole surface behind. A lotion consisting of terchloride of carbon and opium has been kept applied to the part; (an excellent lotion, it may be added, for cleansing a sloughing sore.) On the same day Mr. Cock removed the forearm at the elbow: a few bands of restraining ligaments round the joint, and the median nerve, which remained continuous with the dead part, though apparently having lost its sensibility, were all that it was requisite to divide; there was no bleeding except from a small articular artery; and within two days of this time the brachial artery continued pulsating down to the elbow, and can now be felt about half an inch above the anterior edge of the wood.

Nineteenth day: Up to this date, since the slight operation above detailed, the patient has continued very well, until to-day, when Mr. Stocker perceived an expression of countenance like that of tetanus, the most obvious symptom being, however, the partial manner in which he opens his mouth when asked to show his tongue. On being questioned, the boy says he feels some stiffness of the jaw. There are marked transverse wrinkles in the forehead from contraction of the occipito frontalis. The abdomen is hard, and the bowels confined. Pulse increased in frequency, 96. A dose of compound senna mixture was given immediately, and Mr. Cock resolved to attack the disease at once by the tonic plan of treatment. He therefore ordered three grains of disulphate of quina every fourth hour, and the allowance of wine was increased from eight to twelve ounces per diem. On the second day after the first tetanic symptoms, the patient complained of some stiffness of the neck, otherwise there was no material change. Pulse 88. When sleeping, the transverse wrinkles of the forehead were not so much marked. The wound continues healthy, and the bowels have been relieved.

Third day: The trismus is increasing, muscles of the abdomen very hard, but no pain. Pulse 84. Passes a sufficiency of urine.

Eighth day of the tetanic attack: The trismus has gradually increased to this date, and may now be called complete. The patient can merely show the extreme tip of his tongue, and takes food by a spoon with great difficulty; his appetite, at the same time, is very good. As regards other tetanic symptoms, they chiefly consist in some stiffness of the retractor muscles of the head and neck, and an occasional darting pain there felt, as well as considerable hardness of the abdominal walls. Bowels occasionally confined, and acted upon by rhubarb and saline purgatives; passes urine well; stump continues to look healthy, with common water-dressing.

Tenth day: A little more capability of moving the lower jaw now exists: the bowels, however, have become obstinately confined, and strong purgatives and injections are requisite to obtain any action; stump healthy.

Thirty-eighth day: The tetanic symptoms have gradually subsided during the last four weeks, and may now be said to have quite disappeared; the only difficulty has been in obtaining proper action of the bowels. Croton-oil has been found the most serviceable; but since getting up from bed a few days since, and moving about the ward, the bowels have acted naturally. The patient has continued to take the quinine and wine, and the stump has remained very healthy.

April 8th, being the ninth week after admission: Mr. Cock had intended, now that all tetanic symptoms have subsided, to have removed the portion of denuded humerus, and adjusted the naturally existing flaps, so as to form an useful stump; but to-day, on applying very gentle force, a large piece of the bone (consisting of the whole of the condyles and articulating surfaces, and a splinter, one or two inches long, of the shell of the shaft) came away. Nothing further therefore was done, as it was considered that the portion of the bone left was living, and would give rise to granulations, and the formation of an investing tissue.

April 25th, eleventh week after admission: At this date, the patient left the hospital; the bone had become covered by granulations, on a level with those which had arisen from the natural flaps, and which were nearly cicatrized over at the last date. There is now every prospect that the whole will soon be healed, and a very serviceable stump formed.

About a fortnight after his discharge, the lad presented himself at the hospital, when the whole of the stump was found to be covered by a sound cicatrix, and the cure completed: thus furnishing a most interesting and instructive lesson as to the resources of the *vis medicatrix naturæ*.

LONDON HOSPITAL.

Contusion of the Nape of the Neck, caused by the fall of a bale of cotton; Emphysema; Apparent Recovery; Paralysis; Cure.

[Under the care of Mr. Curling.]

Cases like the present are well calculated to make practitioners extremely careful in giving a prognosis, whenever the spinal column has experienced an injury, be the latter ever so slightly marked; for here hemiplegia occurred suddenly, whilst the patient was considered quite well, and was on the eve of leaving the institution. The following account is derived from the notes taken by Mr. Prater, house-surgeon to the hospital:—

James B——, aged twenty-eight, a tall, muscular, well-formed man, and a dock-labourer, was admitted, Dec. 13, 1850, under the care of Mr. Curling. A short time before the patient was brought to the hospital, a bale of cotton, weighing about four cwts., fell from a height of about fourteen feet, struck him between the shoulders, and violently pushed him forwards against another bale. On examination, he was found to be severely contused about the shoulders, face, and chest, but no fracture, either of ribs or vertebræ, could be detected. The respiration was tolerably free, and the shock sustained by the system did not seem to be of a severe kind.

Fomentations were applied to the bruised parts, and on the next day emphysema was observed over the front of the neck and upper part of the chest, no difficulty of breathing being thereby induced. The patient had the free use of all his limbs, and did not complain of much pain. Mr. Curling prescribed a powder of calomel and jalap, which operated freely. A saline antimonial mixture was afterwards ordered, to allay feverish symptoms; and the patient progressed so favourably, that four days after admission, as he was apparently doing quite well, he was allowed to get up. On the sixth day, the emphysema and the extravasated blood of the contusions were so fast disappearing, that the patient was discharged, seven days after admission.

On the eve of his departure, however, while walking about in the forenoon, he felt suddenly very faint, and on being immediately seen by the house-surgeon, paralysis of the right side of the face was observed. The patient complained of being "*numbed*" on the

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whole of the left side of the body, and was unable to move his limbs on the same side. Articulation was imperfect, the pulse slow and weak, and the skin cold.

Mr. Curling ordered the patient to be placed in bed, and a powder of calomel and rhubarb to be administered; the latter was swallowed with much difficulty, and almost immediately rejected. Towards the evening of the same day the circulation became a little more active, the skin warm, but the vomiting continued. A blister was then placed on the nape of the neck, and the patient ordered to take two grains of calomel night and morning.

On the first day after the paralytic attack, the symtoms were not improved, and the articulation still more embarrassed; but it was noticed that the paralysis extended neither to the bladder nor rectum. An aperient draught having been administered, deglutition was so imperfect, that the medicine almost produced suffocation. This paralytic state of the pharyngeal muscles lasted four days, the patient finding it all this while extremely difficult to swallow any fluid. The pulse rose now to 90; the temperature became normal on both sides of the body, but on the left the limbs were quite powerless; they retained, however, a small amount of sensation, and the urine as well as fæces were evacuated at will.

On the fourth day after the seizure, the patient regained a little power over the paralytic leg and arm, and his speech became somewhat more distinct. Mr. Curling now desired that he should have strong broth, and take colocynth and camomile at bedtime. The symptoms improved gradually and steadily up to the tenth day, when another blister was placed on the nape of the neck, and the calomel continued in the dose of one grain every night, as the mouth was but very slightly affected. The blister was repeated on the same spot as before, and a few days afterwards one was placed behind each ear; the patient went on very favourably during the whole course of the treatment, and one month after the paralytic attack he had recovered the partial use of the affected side, and articulation had become much easier.

In the beginning of the fifth week he was allowed full diet, and ordered to be galvanized along the spine twice a week. From this time the patient gradually improved, and required no more medicine; he could walk tolerably well, though he dragged the left leg a little, and he was able to lift his left hand nearly as high as his shoulder. He was made an out-patient seven weeks after the hemiplegic attack, and improved so rapidly afterwards, that when seen a few weeks subsequently, he presented hardly any signs of having ever suffered from paralysis.

The first circumstance worthy of remark in the foregoing case is the emphysema which appeared in the cellular tissue of the neck, soon after the accident. Was this escape of air owing to a slight lesion of the larynx or trachea? or had a rib, in the act of falling forward, been splintered on its internal surface, the pleura having thereby suffered an inconsiderable solution of continuity? It is plain that in either hypothesis the wound was plugged up with blood for a little while, as the emphysema only appeared on the day after admission. Nor can the pulmonary injury have been important, as the air was soon absorbed and the escape did not continue.

The accession of paralysis when the patient had already been discharged, is another fact connected with this case which is not a little puzzling to explain. Among the conjectures which might be offered, sudden hæmorrhage within the spinal canal, in the vicinity of the nape of the neck, and consequent pressure on the substance of the cord, might be mentioned. This supposition is supported by the fact that the patient became very faint just before the hemiplegia appeared; and if we may be allowed to argue by exclusion, we would say that *other* lesions of the cord besides temporary pressure by a clot susceptible of being re-absorbed, would hardly have been followed by the comparatively rapid recovery of motion and sensation in the affected limbs.

That the mischief did not exist in the brain could be inferred from the unimpaired consciousness during the attack; and that the spinal canal was most likely the seat of hæmorrhage might be suspected from the sudden faintness and loss of motion below the joint (the nape of the neck,) where the injury had originally been received. But allowing that hæmorrhage was the cause of the hemiplegic attack, the question is, how the extravasation took place? Inflammation and subsequent ulceration of a vessel might be named; but without indulging any further in hypotheses, we may conclude by remarking, that this case yields another proof of the power possessed by the medulla spinalis of recovering its integrity after acute attacks—a power which seems entirely wanting when the patient is suffering from a chronic affection of the spinal marrow. The reader has doubtless remarked that the *right* side of the face was affected, whilst the paralysed limbs were on the *left* side of the body. This fact is certainly worthy of notice, but not at all easy of explanation.

Lithotrity in a young subject.

[Under the care of Mr. CURLING.]

We have frequent opportunities of seeing lithotrity performed in the hospitals of London, and from the facts which have come before us we should be inclined to believe that that operation, though sometimes looked upon as less adapted for the young, offers with the latter a very fair chance of success. If a conclusion might be drawn from a few facts which have come under our notice, we would say that lithotrity is especially hazardous in patients beyond fifty, particularly where the prostate is enlarged, and the bladder in a diseased state. In such cases we have known the patients to sink after a couple of operations, from mere irritation and exhaustion.

A statistical account published by a few of those surgeons who frequently perform the operation in private practice would be a great boon to the profession, for it is evident that where the cases are numbered by hundreds, very useful data might be derived from their arrangement.

It would appear that, with the young, the risk principally lies in over-distension of the urethra, the lacerations of this canal by irregular fragments subsequently voided, and injury to the small bladder during the act of searching and crushing. But these accidents may be avoided by proper care and management, and it is very likely that before long lithotrity will become a favourite operation in the treatment of young subjects affected with calculus. We shall pay especial attention to the cases of this nature operated upon in the metropolitan hospitals, and bring them seriatim before our readers. The present one was noted by Mr. Brushfield, house-surgeon to the hospital.

Samuel C——, aged fourteen, residing in Poplar, was admitted March 25, 1851, under the care of Mr. Curling, presenting symptoms of the presence of a calculus in the bladder. The mother stated, that when her child was four years old he was seized with inability to void his urine, and a catheter was therefore introduced twice every twenty-four hours for eleven days. At the end of that time the instrument was arrested in its progress.

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the obstable being a small calculus lodged in the urethra; this stone, by repeated straining, was forced to the external orifice, and then removed by dilating the aperture. The calculus resembled a small cherry-stone, and was composed of lithate of ammonia.

Two years afterwards, the patient complained of pain in the perinæum and urethra; a warm bath was ordered, after taking which two small white calculi were voided, of such crumbling consistence that they soon fell into pieces. From this time to about six months ago the boy remained in perfect health, when he was attacked with violent pain in his side, soon afterwards followed by a difficulty in passing his urine, which at times flowed freely, with sudden stoppages, and at others dribbled away.

These symptoms were at first occasional, but they soon became constant, and were attended with pain in the glans penis and in the perinæum, as if these parts were being perforated by pins. For the last six weeks before admission this pain had become very acute, and the urine was frequently turbid, and deposited a jelly-like substance. In addition to the above symptoms, the patient had now and then great difficulty in walking about, from the aching pain produced by such movement; the pain, however, ceasing immediately he sat down. Another severe symptom was great uneasiness felt at the neck of the bladder, when he had nearly emptied that viscus.

A catheter was introduced by Mr. Curling, and a stone of moderate size was detected; the urine was found clear, and depositing a large quantity of transparent mucus: the pain in passing it was, however, trifling. Mr. Curling ordered the patient to be put on full diet, to have a suppository of ten grains of soap pill, and to take ten grains of carbonate of soda three times a day. A week after admission the patient was brought to the operating theatre, and placed under the influence of chloroform, as Mr. Curling had resolved to remove the stone by crushing.

The bladder was injected with tepid water, and the screw lithotrite introduced. We should here mention, that it was maintained a short time ago, by a French surgeon, that the bladder could not retain the injected fluid when the patient was narcotized. This is to a very small extent correct, as the warm water under such circumstances has been known to be squirted out; but we must say, that during a great many operations which we have witnessed in the hospitals of London we did not perceive any much occurrence.

Mr. Curling readily succeeded in grasping the calculus twice between the blades of the instrument, and crushing it with comparative ease, as it appeared to be composed of soft materials. When the instrument was withdrawn, some of the detritus, in the shape of a white powder, remained in the beak. The patient was sent to bed, and ordered beef-tea and a mucilaginous mixture; and in the evening he passed a large quantity of urine, containing some white powder, and irregularly-shaped fragments, which were composed of the triple phosphate. Pieces of stone continued to pass for the fire following days, some of them being the size of a pea, and giving but little pain in their transmission. On the sixth day, the boy was able to walk about the ward with comparative ease; the urine was becoming clear, but still deposited a transparent mucus.

Fourteen days after the first operation, the patient was again placed on the operating-table, and made to inhale chloroform. Mr. Curling introduced the lithotrite scoop, and removed some masses of white calculous matter. The next day one large piece and several small ones were passed, the former looking very much like a portion of the original nucleus. The urine now became clear, the mucus almost disappeared, and the boy walked without pain. Seven days after the second operation the instrument was again introduced, but no calculus could be detected; no pain was complained of, and the boy began to run about, which he had not been able to do for the last six months; urine quite clear; no mucus whatever. The patient was discharged, being quite well, two months after admission; and he called at the hospital, ten days afterwards, to say that he never was in better health or freer from pain in his life.

Such cases as the foregoing are well calculated to bring lithotrity into favour in the treatment of young calculous patients; the more so when it is noticed how little the urethra suffers from the passage of the fragments, and how inconsiderably the mucous membrane of the bladder is irritated either by the instrument or the detritus. It must certainly be an advantage in lithotrity to have pretty healthy organs to deal with, the contrast between a sound bladder and normal size of the prostate gland, in the young, being very striking with the very frequently diseased bladder and enlarged prostate of the old. It will be noticed, that in the earlier history of this patient, a calculus was voided through the meatus by repeated straining. This may be looked upon as a process not free from danger, as the urethra may suffer severely; and we are by this circumstance reminded of a case illustrating a different line of practice. We beg to adduce it under the following title:

Surrey Dispensary.

Calculus in the Urethra.

(Under the care of Mr. Forster.)

A pale, cachectic-looking boy, about six years old, with all that appearance of haggardness and anxiety incidental to suffering about the pelvic organs, was brought to the Dispensary in February, 1850. The abdomen was enlarged, and the boy had had measles. His mother stated that she scarcely knew what was the matter with the boy, but that about twelve months ago, after he was first breeched, she found his small-clothes were constantly wet, and that his urine was continually flowing from him. From that time until the present he has been in the habit of getting up six or eight times in the night to pass his urine, for fear of wetting the bed. When she first noticed him, he frequently pulled the prepuce, and his urine would sometimes stop suddenly; but these two symptoms had not been present for some time, most probably from the altered position of the stone; he has never passed any blood.

The patient had continued getting worse, though he has had slight temporary relief from medicine, and from the constant irritation he appears almost worn out. Is extremely irritable and peevish; no apparent disease in any organ; chest healthy; urine pale and clear, occasionally a slight sediment.

Mr. Forster immediately passed a sound down the urethra, and at the bulbous portion of the canal the passage of the instrument was arrested by contact with a stone. Not deeming it necessary or right to delay affording the child relief, he was placed, as in the operation for lithotomy, and the urethra opened in the perinæum, where the stone was readily felt; but some difficulty was experienced in extracting it, in consequence of its having become imbedded in a species of sac. The upper part of the stone, in which was a groove, forming the floor of the urethra, was so worn by the urine and the forming of this canal as to give it the appearance of a common date kernel, but somewhat shorter. It so completely resembled such kernel that the mother did not believe it had been extracted from the child.

The caculus was of a brownish colour, slightly nodulated, and, upon chemical examination, found to

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be composed of pure lithic acid, with the same nucleus.

The urine continued to flow from the wound in the perinæum for one month, until it was considered necessary to pass a catheter by the urethra; and soon afterwards the whole of the urine came by the natural passage, and the opening healed. The child is now fat and well.

This is one of those cases which, after the operation, might be considered in an exclusively medical point of view, and measures be taken, in respect to diet and habits, to forestall the formation of another stone, which event is, according to what happened in Mr. Curling's case, (see above,) very likely to happen.

KING'S COLLEGE HOSPITAL.

Recurrence of a Melanotic Tumour; Removal.

(Under the care of Mr. Fergusson.)

Melanosis very frequently attacks the eye, and it is supposed by some pathologists that the melanotic transformation is closely connected with the peculiar nature of the choroid coat. It is likewise thought that a melanotic tumour unconnected with encephaloid disease, when once extirpated, is not likely to recur, though the growth be certainly of a malignant kind. We lately noticed a patient of Mr. Fergusson with whom the seat of the melanosis was *not* the eye, and who was evidently suffering from a recurrence of the disease; we, therefore, beg permission briefly to put the same upon record.

Mary Ann G——, forty-five years of age, married, a woman with dark hair, white eyelashes, and a melancholy appearance, was admitted Dec., 1850, under the care of Mr. Fergusson, for a tumour in the right groin. This growth is about the size of a small orange, oval, and is extending from the anterior superior spine of ilium to half way down Poupart's ligament. It is solid, unattached to the skin, not lobulated, and has been considered by many practitioners to be hernia.

On inquiry, it was found that two years ago, a small pendulous tumour of a dark colour, had appeared on the right side of the mons Veneris; it had a narrow pedicle by which it hung, and gave no pain for five weeks; the skin over it then ulcerated, and a substance like dark sponge protruded. This bled by oozing for a week, and as the patient could not stop the loss of blood, she went to a surgeon, who applied a ligature round the neck of the tumour. When this practitioner found that the latter did not separate, he cut it off altogether with the scissors, and shortly after this operation, the skin around the cicatrix became of dark colour, and of a horse-shoe shape.

Soon after this period, the patient felt pain down her thigh and in the groin, and the present tumour, which is deeper, and to the outer side of the above mentioned mark, was perceived. It was hard, painful, about the size of a marble, and remained stationary until Feb., 1850, when it grew rapidly, and has continued to increase up to the present time. It appears to be moveable in all directions, is unattached to the skin, but seems to have deep-seated connexions.

During the first month of her stay in the hospital, the patient felt more and more pain in the tumour, and after this lapse of time Mr. Fergusson removed it, the patient having been rendered insensible by chloroform. Four or five vessels were tied, one of which seemed to be a glandular branch of the femoral artery and of large size. The tumour turned out to be a melanotic one; it was contained in a cyst of condensed cellular tissue, and was attached towards its inner margin to the neighbouring glands, one of which was removed with the tumour. The latter was about the size of an orange, and when cut into, presented all the characters of melanosis. Mr. Fergusson, in addressing the pupils, remarked that some doubt had existed respecting the nature of this tumour, but it was due to Mr. Luxton, the house-surgeon, to state that he (Mr. Luxton) had expressed a belief that the growth was of a melanotic kind. The patient progressed very favorably, and was discharged well about six weeks after the operation.

Varicocele treated by the Needles and Twisted Suture.

(Under the care of Mr. Fergusson.)

We have had frequent opportunities of seeing Mr. Fergusson treat varicocele by the twisted suture, and the success which has generally attended these operations induces us to acquaint the readers of the "Mirror" with Mr. Fergusson's mode of procedure. It seems pretty well agreed among surgeons that *all* cases of varicocele do not require operative interference, and that proper and well-regulated support, where the affection is not of a severe description, will generally afford sufficient relief. But the distended veins of the cord may cause such painful dragging and disturbance of the general health, that it becomes the surgeon's duty to propose remedial means to his patient. We shall refrain from passing in review the various kinds of operations which have been resorted to, in order to obliterate the varicose spermatic veins; these methods are sufficiently well known; we would, however, just refer to one lately advocated by M. Boyer. This gentleman, in the new edition of the work of his father (Baron Boyer) which he has just completed, advises in varicocele to make an incision over the external ring, to lay open the fibrous sheath of the spermatic cord, and to tie everything contained in it except the vas deferens and the artery. This method must certainly be very hazardous; and though the author cannot bring any number of facts to bear out his idea, he prefers his plan to the ligature advised by M. Ricord, cauterization, or the rolling up of the varicose plexus according to M. Vidal's method.

We beg permission to adduce the following case, as being a fair sample of the various others in which we saw Mr. Fergusson operate in the same manner:—

W. J——, aged twenty-eight, admitted March 13, 1851, with varicocele of the left side. He has had an aching pain in the scrotum for the last eight or nine years. The veins of the left side are much enlarged and turgid, particularly after a long day's work; there is dragging pain at the cord, and severe aching in the back and loins. The patient has been wearing a suspensory bandage for the last two years; at present, the skin on the left side of the scrotum is very lax, the veins long and full, the left testis much smaller than the right, and there are also varicose veins on the left leg. The man suffers a good deal of pain in the varicocele while standing; but when he lies down, the swelling and uneasy sensation in the veins disappears. General health good.

On the 15th of March, Mr. Fergusson passed three needles under the scrotal vein, and twisted strong silk round them, as in the hare-lip operation. Two days afterwards the inflammation was rather severe in the scrotum, but the patient only complained of heat in the part, and of a little cough. On the eighth day the needles ulcerated out, and no pain or tenderness of the cord was complained of. On the seventeenth day, Mr. Fergusson removed the needles, which were very nearly out. On the twenty-second day, the sores left by the needles were rapidly healing, and the patient was soon discharged, free from the very inconvenient affection for which he had been operated on.

The mode of operating illustrated by this case combines many advantages, and does not seem, while it effectually obliterates the veins, to inflict such violence upon the vessels as is done by a method newly intro-

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duced at Paris by M. Vidal, Surgeon to the Hôpital du Midi.

This latter method consists in passing a silver wire, held by a needle, behind the veins of the cord, these vessels and the vas deferens having first been separated. Another silver wire is then introduced in front of the vessels, this second wire running through the same apertures as the first. The veins are thus situated between the wires, the ends of which are loose on either side, and the latter are now twisted upon themselves. This tortion acts at first only upon the wires, the latter forming a loop which becomes gradually diminished in size, and contains the veins. This first twisting movement tends to reduce the veins to a mere cord, and the wires to a metallic string offering a certain amount of resistance. This metallic string in turning upon its own axis, must evidently carry with it the parts contained within the two wires of which it is composed, and the veins are thus rolled upon this double metallic cord as the rope turns on the winch.

The vas deferens is not included in these displacements; it remains untouched behind the wires, and the testicle is carried upwards towards the abdomen, where the veins have a fixed point; and the more turns are made the higher the testicle is drawn. A small roller is then placed on the skin which separates the apertures of entrance and exit of the wires; the latter are twisted upon the roller, and a probe being passed under it, the parts are still more compressed by means of this kind of packing-stick. The author states that this operative proceeding is divided into three parts: 1, rolling of the veins on the wires; 2, compression of those vessels which are both between and before the threads; 3, section of the veins at various points of their length; in fact, in as many points as turns have been made.

Congenital Distention of the Urethra; Operation.

(Under the care of Mr. Fergusson.)

The patient, Isaac M——, was a little boy, five years of age, who presented a prepuce distended into a bag the size of an apricot. The skin at the orifice was puckered, and formed a sort of valve, which prevented the escape of the urine; the latter dribbling constantly into this pouch, and keeping it always distended. The pouch could be emptied by pressure; the skin covering it looked thin, and several vessels were seen coursing it.

Mr. Fergusson had the little patient put under the influence of chloroform, and slit up the prepuce with scissors; the glans appeared natural, but the pouch of urine being pressed, it became evident that it was formed, not by the dilated prepuce, but by a dilatation of the *urethra itself*. Mr. Fergusson removed the foreskin and most of the distended urethra; three vessels required ligature, and the part was dressed with wet lint.

The dilated urethra formed a bag, one extremity of which was attached to the corona glandis, the other to about the middle of the corpus spongiosum, the canal having two orifices, one at the meatus, the other on the posterior attachment of the bag. The parts cicatrized well, and the little patient was discharged in very good condition.

On examining the parts when removed, a tissue of moderate thickness, having the appearance of the corpus cavernosum penis, was found between the lining membrane of the cyst and the external skin. The lining membrane itself presented the characters of mucous membrane upon microscopical examination. On the surface was a thin layer of hardened epithelium, similar in structure to that of the glans.

Scirrhus of the Labium.

Though surgeons cannot be said to be quite agreed as to the most judicious course in cases of scirrhus, it seems generally understood that it is proper and right that a patient suffering from scirrhus, either ulcerating or not, should be freed from the growth by the knife, provided the disease have not spread too extensively, the patient be too old or too weak, or the operation offer some peculiar anatomical difficulty.

This rule is generally acted up to, in spite of the very strong likelihood of the recurrence of the disease in some other part of the body, or the cicatrix itself; nor can operating surgeons be blamed for adopting this course, for it must be allowed that some years of comparative comfort are not too dearly bought by the inconvenience of a surgical operation. The only argument of great weight which may be brought against this practice is, that the use of the knife may hasten the fatal termination; this would certainly be an overwhelming obstacle, if proofs could be brought forward that this is the case in a fair amount of instances.

We were led to consider this subject a short time ago while witnessing Mr. Lawrence's visit to his wards at St. Bartholomew's Hospital. In one of these we saw a woman, about sixty-five years of age, who was suffering from a cancerous growth in the groin, and Mr. Lawrence was kind enough to inform us that he had removed the labium of the same side several years before, on account of cancerous disease. Operative interference was now of course at an end; and this case reminded us strongly of the patient, a chimney-sweeper by trade, which we mentioned a little time ago as having being admitted under the care of Mr. Gay, at the Royal Free Hospital, for cancerous disease in the groin. This was a recurrence of the affection after a former removal of the testicle attacked with cancer.

It may, however, be surmised that some of the numerous cases of this nature escape the recurrence of the disease as but a small proportion of those operated upon return into the surgeon's hands, allowing, of conrse, that recurrence does sometimes take place without the patient's applying to the same practitioner. Though statistics would here be extremely useful, they are altogether wanting; nor does it appear very feasible to collect a sufficient number of authentic facts on this head.

We must apologize for a little rambling, and forthwith adduce a few particulars of the case of scirrhus labii lately operated on by Mr. Fergusson. In the month of January, 1851, Mary W——, aged fifty-six years, married, and of temperate habits, was admitted under the care of Mr. Fergusson. She stated, that eight or nine months since, she first noticed a small hard lump in the left labium, attended with a feeling of soreness; this tumour quickly enlarged, and lancinating pains were felt. About one month before admission the tumour had burst, and since that time had continued to discharge a thin, fœtid, and irritating matter; the open part of the tumour having now reached the size of half-a-crown, and presenting a greyish unhealthy fundus, with jagged edges. Near the centre is a deep excavation, but the other portions are covered by pale-red granulations. The tumour is freely moveable, and the inguinal glands are not enlarged. The patient is languid, and of a sallow complexion; her aunt died from cancer of the breast.

On the 18th of January, Mr. Fergusson removed rapidly, while the patient was narcotized by chloroform, the whole of the parts connected with the morbid growth. One month after the operation, the patient was discharged relieved, the wound having healed quickly, there remaining, however, in the centre, a suspicious spot.

Since the present case was treated, we noticed two others of an exactly similar kind, which were operated upon by Mr. Poland, at Guy's Hospital. Both patients

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were between fifty and sixty: the ulceration was more extensive than in Mr. Fergusson's case, and the clitoris involved in the disease. Mr. Poland removed the two labia, the clitoris, and a portion of the nymphæ in both cases; the hæmorrhage required the tying of a great many vessels; both patients, however, progressed very favourably, and were discharged in good condition.

We shall acquaint the readers of the "Mirror" with any recurrence which may come to our knowledge in the foregoing cases. Nor shall we fail to note those of return of cancerous disease whenever it comes under our notice, as such facts are of great value in practice. One case of the kind very lately attracted our attention in one of the separate wards of St. Bartholomew's Hospital.

The patient was a discharged soldier, under the care of Mr. Stanley; the whole of the under portion of the chin, and part of the neck and cheek on the left side, formed one hideous nodulated and suppurating mass of cancerous ulceration. This patient, about two years previously, had had, while abroad, a cancerous tumour removed from the lip, and about eight months after the operation the glands at the angle of the jaw had become affected. Such cases are melancholy to observe, for here our art is completely baffled.

The stump of Mr. Prescott Hewett's patient at St. George's Hospital has since our last report increased to an enormous size; it is now as large as three adult heads, and the patient in a very weak state; the whole of the nourishment he takes being seemingly absorbed by this gigantic encephaloid growth.

Cloruretted Hydrochloric Ether, a new Anæsthetic Agent just introduced by Dr. Snow.

In witnessing some operations performed by Mr. Fergusson, Saturday, June 21, we learned that Dr. Snow was using, with much success, a new anæsthetic agent called chloruretted hydrochloric ether, which Dr. Snow believes had not been administered before, except in an operation in this hospital on the previous day, when Mr. W. Hewett, the house-surgeon, removed some venereal warts from a patient in one of the wards, and applied strong nitric acid to the raw surface.

The substance is called by its discoverer, M. V. Regnault, *l'ether hydrochlorique monochloruré*. It is the first of a series of five bodies which he formed by decomposing muriatic ether by means of chlorine gas in the sunshine. A liquid which is a mixture of these bodies, has been used for some months in Paris by M. Aran, a very zealous experimentalist, as a local application to relieve and prevent pain. Dr. Snow having procured a quantity of this through the kindness of Mr. Morson, chemist, of London, separated the first and more volatile of the liquids by distillation, and he thinks that it possesses some advantage over chloroform.

ROYAL FREE HOSPITAL.

Intestinal Obstruction; Amussat's Operation: Death; Autopsy.

(Under the care of Mr. Gay.)

We had, a very short time since, occasion to refer to Amussat's operation, when reporting a case of thyroid hernia, under the care of Mr. Stanley. It will be recollected that the colon in Mr. Stanley's patient was found, on a post-mortem examination, empty and very much contracted; this state of things pointing to the little good which an artificial anus in the loin would have produced. We have now to relate a case where the descending colon was found in a somewhat analogous condition upon Amussat's operation being performed; the opening of the lumbar region being, however, fully justified by the peculiarities of the case.

The instances of recovery, after the above-named operative measures, published by Continental and English surgeons, are well calculated to create a certain confidence in the operation; the two cases inserted in the last volume of the *Medico-Chirurgical Transactions*, being not the least important in the series. Intestinal obstruction is a subject of vast importance both to the physician and the surgeon; we shall therefore seize every opportunity of giving publicity to the facts derived from the practice of the London hospitals which bear especially upon this question. Several cases where no operation was performed, and where the autopsy disclosed the nature of the obstruction, lately came under our notice; we shall take an early opportunity of recording them.

Mr. Gay's patient was a woman sixty years of age, who had for some years been suffering from cancerous disease of the womb. For the last two years, together with the advance of this disease, her bowels had become constipated, and she found it difficult to procure regular evacuations; sometimes several days would elapse, and then the bowels would act, although but slightly. During this period she suffered little or no abdominal pain. For a fortnight before her admission to the hospital, no alvine evacuation had taken place, although the usual remedies had been pertinaciously resorted to.

On admission Mr. Gay examined her. The abdomen was much distended, and universally resonant on percussion, but not tense. There was very little pain on pressure, and what she complained of, appeared to be from the manipulation of over-distended bowels rather than from peritonæal inflammation. At times, however, for the last three or four days, she had experienced paroxysms of forcing pain, accompanied with general distress. Sickness had commenced about ten days before, and now she vomited everything she took: but the matters vomited were not fæcal.

On examining the rectum, the finger could be passed easily to very nearly its own length; beyond that, there appeared to be no passage, but a uniformly hard mass was felt quite fixed in the pelvis and apparently pressing the rectum so firmly against the sacrum as completely to close it. The mucous membrane, as far as it could be felt, was healthy; and no indications could be found of the rectum itself being diseased. On passing the finger up the vagina, the os uteri was felt to be very jagged and painful to the touch; a flow of blood and of ichorous matter left no doubt but that the os tincæ had been destroyed by cancerous ulceration. The body of the uterus was further found to be densely indurated, very considerably enlarged, and almost immoveably wedged into the cavity of the pelvis.

Mr. Gay endeavoured to pass O'Beirne's tube, but found it impracticable: the efforts which had already been unsuccessfully made, and the state of the contents of the pelvis, induced him to forego further attempts of the kind.

The loins were now examined, and the left certainly gave more resonance on percussion than the right, and this clear sound appeared to take the line of the descending colon.

There was considerable anxiety of face, with great prostration; and as the state of the uterus appeared to be the cause of the obstruction, and there was no reasonable probability that the patient would be able to pass fæcal matter again through the rectum, Mr. Gay recommended the descending colon to be opened in the loins, and the advice was readily assented to.

The patient was speedily got under the influence of chloroform by Dr. Snow, and Mr. Gay began the operation by making an incision about two inches in length, as nearly as could be judged, parallel to the outer edge of the quadratus lumborum muscle. The

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skin, fascia, and superficial layer of muscles were now cut through, and the sheath of the quadratus lumborum reached without difficulty. This sheath was then opened, and, avoiding the muscle itself as much as possible, an incision was made into the deeper layer of the sheath. Some fat, which was at first supposed to be the bowel, presented itself; and after clearing away more than the usual quantity of adipose matter in this situation, the bowel was discovered by the finger beneath the tract of the wound. It was, however, empty, to the surprise of the operator; a circumstance which added considerably to the embarrassment attendant upon the operation in a tolerably fat subject.

It was then very clear that there was another source of obstruction; but where, or of what description, was difficult even to speculate upon. The absence of fæcal vomiting and severe pain made it improbable that the stoppage was above the cæcum; and the general distention and sonorousness of the abdomen, removed the guides which in cases of obstruction the physical symptoms sometimes afford.

Another effort was made to inject the bowel per anum, and after some difficulty, a very *small* tube was passed beyond the uterus. The patient had been lying prone for some time; and it was presumed that the weight of the uterus had dislodged it slightly from its close proximity to the sacrum, and thus permitted a small tube to pass. Fluid was injected, and discovered to pass into the colon as far as the wound in the loin, but on removing the tube nothing returned or could return.

It was now very obvious that whatever the obstruction above this point might be, there was sufficient of it below to prevent fæcal matter from being evacuated, and that the patient must perish from this alone. Trusting that the obstruction above might not be of a permanent nature, Mr. Gay proceeded to open the bowel, and after doing so, he stitched it to the edges of the wound. The injected fluid passed out, and some large and intensely hardened scybalous masses were removed by the finger, as far as they could be reached.

The wound was just covered by warm-water dressing, and the patient removed to bed. She had a good night; a little thinnish fæcal matter passed, but in the morning she became very faint, and died suddenly.

A post-mortem examination was made by Mr. Gay a few hours after death. On opening the abdomen, the small intestines to within eight inches of the cæcum were much distended with thin fluid, but there was no evidence of peritonitis. The terminal eight inches of the ileum were lying upon the fundus of the enlarged uterus, and had become adherent to it by dense bands: the bowel itself, so much contracted that a goose-quill could hardly pass through it, contained a little very viscid mucus. This contraction appeared to have resulted from the cessation of the peristaltic action of the bowel through its adherence to the uterus, and was such that the course of fæcal matter through it was completely interrupted.

The cæcum and colon contained a large quantity of scybalous masses, so compact in their structure that they might almost be considered as concretions. In the sigmoid flexure was found the fluid that had been injected, the bowel being filled to the promontory of the sacrum, where the further flow of the fluid was impeded by the uterus. This organ was very much enlarged, its tissue carcinomatous, and its os tincæ destroyed by a jagged and malignant ulceration. It completely occupied the pelvis, was closely attached in front to the posterior wall of the bladder, and behind to the rectum. The latter was firmly pressed by it against the sacrum, and through the constant pressure to which it had been exposed, had become so diminished in calibre, that the little finger could scarcely pass through it.

Mr. Gay remarked, that in this interesting and instructive case there was a double seat of obstruction—first, in the rectum, from the pressure of the cancerous uterus; and second, in the last portion of the ileum from "retrecissement." The symptoms, however, were such as are most commonly found when the obstruction is confined to the large bowel, and there was a remarkable absence of those signs which usually denote obstruction about the ileum, such as paroxysmal pain, fæcal vomiting, or the symptoms of peritonitis: the latter inflammation often resulting from distension of the ileum in analogous cases.

The cause of the narrowing of the ileum was most likely that which has already been named, and illustrates in a very marked manner Mr. Stephen's views as to obstruction.

Another point of interest is the fact observed by Mr. Gay in other cases—viz., that obstruction to the passage of fæcal matter through the rectum, from cancerous disease of that bowel, may occur, and lead to fatal consequences, and yet sufficient room be left for the passage of small tubes, whereby that bowel may be injected; so that a *diminished* channel is likely to be quite as dangerous by obstruction as though it were *completely* occluded.

SOMERSET COUNTY PAUPER LUNATIC ASYLUM.

Two Cases of Scurvy.

Reported by Robert Boyd, M.D., Physician and Superintendent.

Scurvy is now seldom seen in ordinary hospital practice in this country, except in the hospital ship *Dreadnought*, where sailors from foreign vessels are received. It has occurred in some instances in our prisons, and in lunatic asylums in India. The late Dr. Prichard, in his Treatise on Insanity, p. 149, mentions it as occurring in the advanced stage of lunacy. We read of it in former times, as so destructive to navies and armies, that frequently half the men fell victims to it; and even a century ago, Anson was obliged to remain four months at the Island of Juan Fernandez, to recruit his crew, having only six foremast men of a crew of 470 able to do duty; one of his ships had lost eighty men in a month from this direful disease.

Our great circumnavigator, Cook, proved that by strict attention to the diet of his men, and the state of his ship, he could keep his crew in the highest state of health, in all climates; still, so slow were the naval authorities to adopt his principles or to make any change, that scurvy continued to be the scourge of the navy for fifty years longer, and sailors by hundreds and thousands continued to be its victims. So late as the year 1790, we read of 2400 sailors of the Channel fleet being laid up with scurvy.

This disease is attributable to errors in diet, where vegetables, particularly of the class Cruciferæ, such as cabbage, turnips, cress, have been entirely excluded.—The two following cases occurred in persons of feeble constitution; they are examples of scurvy resulting from a continued diet of bread and cheese, and are worthy of attention, as this is a principal food of the labouring classes of this country. The first is remarkable as having happened when a plentiful allowance of cider was taken, which is supposed to be anti-scorbutic; the second is to be noted as showing that in three months a person may become affected with scurvy by abstaining from vegetables, and taking one meal of bread and cheese daily. And they may both warn us how necessary it is that we should use caution in yielding to the whims of the insane, particularly in those who are prone to persist in the use of an improper diet.

Case 1.—J. A——, aged fifty-nine. Had been nine months in another asylum, whence he was transferred

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to this in March, 1848. He had been a farmer. The cause assigned for his derangement was loss of property. He fancied himself a king, but did not act in accordance with his kingly assumption. His disposition was suspicious, temper stubborn, complexion sallow, pulse seventy-six, tongue clean, skin cool, bowels constipated. It was stated that he had lived exclusively on bread and cheese; he obstinately refused any other food after admission here, and it was supplied to him for breakfast, dinner, and supper, with nearly a pint of cider at each meal. In six weeks he complained of pains, which were worst at night, with swelling of the right knee and leg, for which he was sent to the Infirmary. After a few days, the swelling somewhat subsided, but the pains continued. He could not be induced to take medicine or to alter his diet. His appetite gradually became bad; he passed sleepless nights, and always felt chilly. In three weeks after he was sent to the Infirmary, he was so weak as to be unable to leave his bed. There was extensive ecchymosis of the right leg, which was painful, and the swelling had increased; the gums were swollen, livid, and bleeding. He was now induced to take draughts containing citric acid; quinine was also given, eggs, and other nourishment in a fluid state; and in a week afterwards, symptoms of amendment appeared. The swelling diminished, the mouth was still sore. As soon as he was able to chew, fresh meat and cabbage were given to him; he seemed to be aware of his dangerous state, and became tractable. The improvement continued, and in nine weeks after the appearance of the disease, he was able to walk about. His mind also improved. He was soon afterwards discharged, and has since been living at home.

Case 2.—A. L——, aged thirty-eight; reported as having been insane three years: had been six months in a private asylum about two years before admission here. Her conduct was obstinate, and occasionally violent: spare habit; sallow complexion; in indifferent health; pulse 78; tongue clean; skin hot; appetite good; bowels constipated; averse to take exercise; generally occupied at needlework. After some months' residence, she refused to eat the meat and vegetables provided for dinner, and expressed a wish for bread and cheese, which was given to her daily, at the same time continuing the usual breakfast and supper of tea and bread-and-butter. In about three months' time, the left leg and thigh became black and swollen from ecchymosis, presenting the appearance of a bruise at first sight, but which was very soon recognised as scurvy, from its striking resemblance to the former case, as well as by the livid and swollen state of the gums. There was a white margin around the teeth; the inner part of the lips was pale; the surface of the body cold; pulse 84, feeble; eyes sunken, with an anxious expression. An acid mixture, with bark, was administered, and fresh meat, with cabbage or turnip-tops, daily. In ten days afterwards a marked improvement had taken place, ecchymosis disappearing, and the gums improving, and in a month she was convalescent.

DERBY GENERAL INFIRMARY.

Cases treated by Henry Gisborne, Esq., and reported by his Assistant, Mr. George Hughes.

Lithotomy on a Patient in his Eightieth Year.

Samuel T—— was admitted on Monday, July 27th, supposed to be suffering from stone in his bladder. He said he had passed with his urine a large quantity of gritty matter for the last thirty years, and that about twenty years since he introduced a catheter, and thought he struck against something like a stone. His sufferings not being great, he had quacked himself with divers herbs; but within the last few years he had endured great pain, so that he could tolerate his sufferings no longer, and therefore came into the hospital, to use his own words, "to be cut," and that "he would have it out," if it cost him his life.

Mr. Gisborne readily detected a large stone, but the patient's great age appeared to him and his colleagues, Mr. Fox and Mr. Johnson, much against the success of an operation. The patient, however, was resolute; and on Thursday, the 7th of August, Mr. Gisborne, after the administration of chloroform, performed the lateral operation, making a very free external incision. The long bent forceps were required for the extraction of two largeish, oval stones, each measuring about four inches in circumference, one weighing about ten drachms, and the other nearly seven drachms.

August 8th.—The patient passed a good night; urine passes freely by the perinæum. Ordered, an opiate at bed-time, and castor oil in the morning.

9th.—Bowels relieved; no pain.

10th.—Passed a restless night; great depression of spirits; tongue dry; pulse quick; bowels open. A mixture of ammonia and ether every three hours; beef-tea; port wine.

11th.—Rather better. The same diet and medicine.

12th.—He gradually rallied, and has ever since progressed most favourably; the urine partly passes through the penis.

On the 26th of August he took meat and wine, sat up for some hours, and was cheerful at the result of the operation.

Mr. Gisborne also operated, on August 20th, on a boy of eleven years of age, for stone. The operation was quickly performed, and a stone, weighing five drachms, was extracted. This patient had symptoms of peritonæal inflammation on the third day, but the antiphlogistic treatment of leeches, with calomel and opium, checked its progress, and he has since been proceeding most satisfactorily.

NEWCASTLE-ON-TYNE INFIRMARY.

Case of Traumatic Aneurism of the Brachial Artery occurring in the practice of Mr. Heath.

[Communicated by Mr. G. A. Hutton.]

J. C——, aged twenty-three, smith, admitted August 31, 1850. Whilst at work, ten days ago, a piece of steel struck off by the hammer pierced his left arm, inflicting a small wound in the situation of the puncture made in bleeding from the median basilic vein. Arterial blood gushed out, he restrained it by a bandage, and the next morning a surgeon saw the arm. Leeches were applied over the tumour, which had then shown itself. Since that time he has had a bandage and compress round his arm. The small swelling which appeared the day after the accident has now increased to an aneurismal tumour the size of a walnut. The arm is ecchymosed, tender, and swollen. A small scab, with slight redness around it, exists over the wound. The piece of metal is supposed to be in the arm. Compresses to be applied along the brachial, over the tumour, and in the course of the radial and ulnar arteries, and the arm bandaged.

Sept. 6th.—The aneurism is increasing in size; he has no pain in the arm; general health good.

10th.—Mr. Heath determined to cut into the sac and tie the artery above and below the wound in it. Previous to the operation the scab was removed from the wound, when a drop or two of blood oozed out; an incision was then made into the sac of the aneurism, the wound discovered in the artery, and a ligature placed above and below it. Considerable general hæmorrhage, however, still continued from the

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wound, and upon examination it was found that one source of it was an arterial branch somewhat enlarged, given off from the main trunk, just above the site of the upper ligature, and divided near its origin; it was therefore found necessary to apply a ligature to the brachial artery above the origin of this branch. The bleeding was not, however, entirely arrested until another small artery and a vein were tied.

The cavity containing the blood appeared to extend upwards along the vessel within its sheath for a short distance. A small sharp substance was once felt near the wound—very probably the piece of metal, but it was either lost in a sponge, or displaced by a gush of blood.

11th.—He has passed a good night; is rather feverish this morning. To be kept quiet.

13th.—The arm dressed this morning; the wound looks healthy. In other respects he appears progressing favourably.

He continued to improve up to October 9th, when he was dismissed cured.

PORTRAITS AND BIOGRAPHIES OF DISTINGUISHED FOREIGNERS.

The Biography of

JEAN BAPTISTE DUMAS, M.D.,

Representative of the People; Late Minister of Agriculture and Commerce; Professor of Chemistry at the Sorbonne, and in the School of Medicine; President of the Faculty of Sciences; Member of the Institute; and Commander of the Legion of Honour, etc., etc.

BY DR. SHERIDAN MUSPRATT,* F.R.S.E.,
Professor of the Liverpool College of Chemistry, etc.

An intense and perfectly natural curiosity is felt as to the biography of distinguished men of old; but their lives are destitute of that peculiar interest which is attached to celebrated men of the present day. A proper and just biography should combine the sober dignity and sterling value of truth; and comprise sufficient incident in the life of the individual to clothe it with the fascination of romance.

The greatest chemist in France, and late one of her peers, was little better known in England than Mitscherlich previous to the French revolution; but as he now holds an important post in the National Assembly, his name is more promiuently brought before the public He is decidedly monarchical in his views, for, in a recent conversation with him, I could see that republicanism, which produces a constant disquietude among the people, compels him and others of his *collaborateurs* to give up scientific investigations for others of a very different nature in the Chamber of Deputies.

Jean Baptiste Dumas was born at Alais, (Gard,) in July, 1800. He completed his literary education at the age of twelve years; then studied pharmacy in his native town, till he attained the age of fourteen, when he proceeded to Geneva, to make himself more perfect in this branch of science. Being admitted as a pupil in the Pharmaceutical Institution, he gave himself up to chemical researches; but he did not confine himself exclusively to these, as botany and medicine engrossed a portion of his time. He wrote some very interesting treatises upon the latter, which at so early an age exhibited in him extensive knowledge and much talent. In one of the essays which he published in connexion with M. de Candolle, were some observations altogether new and original; but that which above all drew upon him the attention of the learned world, was his beautiful research in animal physiology, in which he was associated with M. Prevost. To Dumas the city of Geneva appeared a field far too limited; he therefore, in 1821, proceeded to Paris, with the view of continuing his investigations, and of courting the society of the distinguished men of the capital. The merit of the young *savant* was not long in becoming known, as genius owns no fetters, and in consequence he was appointed teacher of chemistry in the Polytechnic School, and professor of that science in the Athenæum. This position which Dumas had attained, at the age of twenty-three years, by his scientific discoveries, determined his future profession; he devoted himself entirely to the study of chemistry. His friends were astonished at his success. If a man exhibits genius, as the soul and core of his character, who are so incredulous as his friends and the comrades of his youth?

When Dumas began to soar above his fellows, he fancied they would at least be delighted to find him not unworthy still of their affection. He received them with open arms; they returned his greeting with shyness, and an awkward affectation of sympathy; their conversation lacked freedom; they were afraid of committing themselves before so clever a man; they felt they were no longer *with an equal*, and yet they refused to acknowledge him *a superior*. They were not proud of his success—they were jealous; and the associates of his youth often became the critics of his manhood. "Save me from my friends," an old saying, is very often a natural ejaculation.

Dumas has been actively employed for more than twenty years, during which period he has added an immense amount of information to chemistry; the leading contributions of which I enumerate particularly.

In 1821 he discovered the relations existing between the specific weight of solid bodies and their atomic weight. This investigation was extended by him, in company with La Royer, in the same year, to gaseous substances. His work upon the specific weight of many bodies in the state of vapour, in 1826, was productive of splendid results, which greatly influenced the analysis of organic substances, on account of the determination of their composition, the specific weight acting in many cases as a useful control. With Pelletier he analyzed, in 1823, many organic salts, and determined the composition of a great number of these bodies with more exactitude than had heretofore been done. His excellent investigation with Boullay, in 1827, upon the compounds of ethyle, proved the atomic constitution of the different kinds of ether.

Hennel worked upon the heavy oil of wine, and stated that when he distilled a mixture of one part of alcohol, and two and a half parts of strong sulphuric acid, a little ether passed over first, then a yellow oil, collaterally with a watery acid liquid. He separated the oil by affusion with cold water, and freed it from the water by putting the oil in a capsule, and placing it over sulphuric acid, with fragments of solid pottassa, in a dish, under the exhausted receiver of an air-pump. If we compare his analysis of this oil with that by Dumas, they evidently differ in composition. Dumas stated that he could not obtain the oil twice alike; but he assumes that it contains a true sulphate of oxide of

* The following is the letter which accompanied some dates and particulars relative to the early life of M. Dumas.

Paris, June 9, 1851.

Dear Doctor,—I have the honour of transmitting to you a few notes on my father, indited by himself, which I hope will assist you in drawing up the biography which you evidently desire to write.

Permit me, sir, to express to you all the pleasure which I have experienced in reading the able and well-drawn pages in which you have illustrated the life of Dr. Mitscherlich, and to congratulate myself in anticipation of seeing the same pen write the life of my father.

Accept, I pray you, doctor, the assurance of my respectful and very distinguished consideration. Ernest Dumas,
Private Secretary of the Minister
of Agriculture and Commerce.

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ethyle. Accordingly, he suggests that heavy oil of wine should be termed sulphuric ether; but as this term is usually applied to common ether, a modification of the name is necessary. Nitrous ether has been studied by Dumas and Boullay; they found the specific weight of its vapour to be 2·568, or by experiment, 2.627. The result of their analysis gave four equivalents of carbon, five of hydrogen, four of oxygen, and one of nitrogen, as its composition, which elements are equivalent to ethyle, oxygen, and hyponitrous acid; or they may represent two equivalents of olefiant gas, one of water, and one of hyponitrous acid; or one equivalent of etherene, one of water, and one of hyponitrous acid. The composition of the other ethers of this class allows of similar hypothetical representations; but Dumas' theory, which regards them as neutral combinations of ether with the acids, or as salts of the oxide of ethyle, is the simplest and best.

Oxalic ether, which was discovered by Bergmann, had its principal properties and composition shown by Dumas and Boullay. These chemists, when annalyzing acetic ether, determined its boiling point, and the density of its vapour. Nearly all the compounds of ether have been thoroughly investigated by Dumas. He has been most indefatigable in his labours; moreover, he scarcely ever left an ether, without determining the specific gravity of its vapour, for in that he had an excellent control with regard to its composition.

These investigations are among the most difficult and important in the whole range of chemistry.

I cannot leave the subject of the ethers without stating that Dumas thoroughly investigated the properties of chloroform, iodoform, and bromoform, and further discovered oxamide, in 1830. The latter is prepared by distilling oxalate of ammonia; it is, in fact, oxalate of ammonia, minus two atoms of water. The elements of oxamide are such as to represent two atoms of carbonic oxide, plus a compound of two atoms of hydrogen and one of nitrogen. Dumas very ingeniously suggests that an analogy exists between bihydride of nitrogen—amidogen—and the bicarbide of nitrogen—cyanogen—and that both resemble the haloid bases—i. e., considering amidogen as a compound analogous to cyanogen, oxamide would be analogous to the cyanides and bromides.

In 1832—the year in which he replaced Serullas in the Academy of Sciences—and in 1835, Dumas examined stearoptene, or concrete portion of oil of anise, also the oils of rosemary and valerian. The latter appears, from the researches of this eminent chemist, to exist in phocenic acid, and in the berries and bark of viburnum opulus. Dumas and Stass obtained it from the hydrate oxide of ethyle—the volatile oil of corn spirit; and they proved that it bears the same relation to that compound as formic acid does to wood spirit, or acetic acid to alcohol.

Dumas and Pelouze worked for a short time upon the oil of black mustard-seed; but my friend Dr. Will has more completely investigated this subject than any other chemist. for he devoted many years to the inquiry, as will be pointed out in the biography of this accurate and worthy chemist.

In 1834, Dumas and Peligot diligently examined wood-spirit, which, in reference to its correspondence with the ethylic series, has been termed hydrate of the oxide of methyle. Hypochlorite of lime acts upon wood-spirit as it does upon alcohol, chloroform being one of the products. Its solvent power, with respect to salts, closely resembles those of alcohol, but it cannot, as has been stated, be substituted for alcohol in the preparation of fulminating silver, for according to Dumas and Peligot, the product is oxalate, not fulminate of silver; likewise it converts nitrate into oxalate of mercury. He worked with Stass, in 1840, upon the action of alkalies upon organic compounds at a high temperature, and also produced, artificially, acids, which up to that time were only known as the products of vegetable life. The artificial formation of acids occurring in nature presents, at first, a purely theoretical interest; but such may become of the highest practical importance, when we consider those compounds which now take a high place in medicine and the arts. Indigo has been a subject which did not escape Dumas. The principal result to be noticed in his investigations of the indigos, in 1832 and 1841, is the difference existing between the white and the blue indigo,—the former passing into the latter by merely assuming one atom of hydrogen. Animal chemistry has also been benefited by Dumas' researches, and no doubt his intimate acquaintance with medicine assisted him in his physiological investigations. He proved, by experiment, that the proportion of fatty matter greatly varied in the serum of the blood; and he detected in it, under certain diseases or courses of medicine, bile, sugar, urea, colouring matter, peculiar salts, &c. He found in milky serum eleven per cent. of fatty matters. With Prevost, in 1820 and 1823, he made comparative and exceedingly interesting experiments upon the blood of different animals. They found that urea is detected in the blood when the functions of the kidneys have been much disturbed; and where the urinal secretion is suspended, it is present in a large quantity, which is the probable cause of death often occurring in such cases. They tied the renal arteries of a dog, and then extracted the kidneys; and on the second day after the operation, twenty grains of urea were obtained from five ounces of the blood of the animal. "Dumas' substitution theory" will occupy one of the most important pages in the history of chemistry. He showed that the hydrogen of many compounds may be replaced by a corresponding number of equivalents of chlorine, &c., without altering their fundamental properties. During his experiments upon substitution, he discovered, in 1838,—the year which saw him professor in the Polytechnic School,—the chloracetic acid; and in 1840 the chlorovaleric and many other acids. The original type of the acetic and valeric acids is preserved. They are both formed by acting upon the acids with chlorine, under the influence of sunshine: a violent action at first takes place, attended by a great rise of temperature, so that the acid requires to be cooled by immersion in a freezing mixture. A paper is published in the *Annales de Chimie*, upon the substitution theory, by Dumas, Stass, Peligot, and Piria. In 1841 the subject of this memoir was elected professor to the School of Medicine; and in October of the same year, president of the Faculty.

Dumas has worked much upon affinity and cohesion, and his views upon these are well worthy of perusal. The following extract from Gmelin will, I think, point out the leading feature in Dumas' theory:—"All mixtures of liquids one with another, and all solutions of solids in liquids, are, by Berzelius, Mitscherlich, and Dumas, regarded as non-chemical, unless they occur in definite proportions—e. g., mixtures of water and alcohol, alcohol and volatile oil; solutions of acids, alkalies, and salts in water, alcohol, &c."

Mitscherlich attributes such combinations to adhesion; Berzelius, to a modification of affinity, while, according to his views, chemical combinations, properly so called, result not from affinity, but from electrical attraction. Dumas ascribes them to a *solvent power*, which he supposes to hold a middle place between cohesion and affinity; inasmuch as the former causes the union of bodies of the same nature, the latter that of bodies of very opposite natures, producing compounds possessed of new and peculiar properties; while the solvent power causes the combination of

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bodies of very similar nature, as of metals with metals; acids, alkalies, and salts, with water; rosin and fat with alcohol, &c. I cannot conclude a description of the labours of this eminent author, without mentioning his method for the determination of nitrogen in organic compounds, a process applicable to the analysis of all nitrogenous organic matters, and likewise for the analysis of nitrates.

A full report of this excellent method will be found in Fresenius' Analysis; it is, when properly worked, extremely accurate. I used it in estimating the nitrogen in nitraniline; the theoretical quantity is 20.47 per cent.; experiment gave 20.52. Dumas has investigated the action of sulphate of copper upon the fermentation of dough. He found that even $\frac{1}{1000}$ of sulphate exercised a very powerful action. The greatest effect, he remarks, is produced by $\frac{1}{1000}$, or one $\frac{1}{1000}$. Above this quantity changes the colour of the loaf, and gives it a disagreeable odour of leaven. Alum acts in a similar manner to the salts of copper—*id est*, it enables the baker to make bread with inferior flour and less labour. Such sophistications are highly pernicious to persons of weak constitution.

Professor Dumas was very fond of working in company; decidedly the best mode of procedure in intricate researches. If we look over the scientific annals, we shall find that most of the leading investigations were conducted by two or more chemists. Liebig and Wöhler have worked much together, and the results produced by them conjointly are of much more importance than those arrrived at by either separately. The most striking instances of their joint labours were, uric acid and its vast series of derivatives.

Liebig has written, "I confess that I felt my whole nervous system thrilling as if pervaded by electric currents, when Wöhler and myself discovered that uric acid and all its products, by a simple supply of oxygen, became resolved into carbonic acid and *urea*; thus showing that there existed a connexion between urea and uric acid, such as had never before been dreamed of. Though few words passed between us while engaged in these investigations, yet how often have I seen the eyes of my friend glistening with delight."

How a sentence like the above comes home to the heart of a fellow-labourer in the field of science! I shall never forget when Dr. Hofmann and myself produced nitraniline—the first body discovered possessing basic properties, in spite of the entrance of peroxide of nitrogen—nitrous acid; the sensations of delight that passed through my breast, and also the smile of happiness that pervaded the cheek of my colleague.

We owe to Professor Dumas a treatise on Chemistry as applied to the Arts, which is the most important work hitherto published on the subject. His early labours are published in the *Journal de Physique*; *Annales de Chimie et de Physique*, of which he became editor in 1841; in the *Comptes Rendus* of the Paris Academy; *Journal de Pharmacie*; *Journal de Chimie Médicale*. The lectures which he delivered in 1836 were published by him under the title, "Leçons sur la Philosophie Chimique."

As a popular lecturer Dumas has no equal, of which the crowds that flock to hear him are a sufficient evidence. There is an expression of thought in all his movements, and his details of chemical phenomena are clear, and expressed in language comprehended by every one at all versed in the science. Sometimes these details bring into review some of his favourite theories, then a new animation is superadded to his ordinary bearing, and his illustrations become dramatic.

His lecture-room and table contain the most costly apparatus. He is regardless of expense. To give one instance: If he states that the diamond will burn brilliantly in the flame of the oxyhydrogen blowpipe, the cost of a diamond will not prevent him showing the experiment to his hearers. I wish this Government would enable our professors to be as regardless of money; then English chemists might compete with foreign discoverers.

Professor Dumas' figure is slender; his height is five feet ten inches. The head is large, forehead finely developed; eye intellectual, and expression extremely bland.

The accompanying likeness, taken from a portrait in in my collection, gives an excellent idea of the man. When in conversation his countenance is most animating and winning. His bearing is a little reserved, but to any one in whom he takes an interest he is most affable and agreeable. I was much struck with the similarity between Liebig and Dumas. It is more, perhaps, in manner than in features, but they both have the compressed lip indicative of satire, and we well know that in a controversy their sarcasm is "exquisitely keen."

I had an excellent opportunity of judging of Dumas during the grand Exposition of Paris. Although a pupil of Liebig, notwithstanding, when I gave him my name, he received me most warmly; introduced me to the leading *savans*; gave myself and party an *entrée* to the Chamber of Deputies, of which he is a most active member, and took us through the Exhibition, explaining everything with great frankness. We were all delighted with the ingenuousness of the man; though he impresses a stranger with his consciousness that he justly occupies a high position, affording another instance that a man of talent is sensible of his own merits as he is also of his labours, which may be invisible to all others.

Buffon said of the geniuses of modern times—"There were not more than *five:* Newton, Bacon, Leibnitz, Montesquieu, and *myself*." These, as well as Milton, Ben Jonson, Corneille, and Michael Angelo, knew they were creators long before they were hailed as such by the tardy consent of the public.

Hogarth said to Reynolds on the "Marriage-à-la-Mode," "I shall very soon gratify the world with such a sight as they have never seen equalled." The Bishop of Llandaff, whatever he did, felt it was done as a master; whatever he wrote, it was, as he once declared, the best work ever written on the subject.

Dumas speaks highly of England and the English; and when I requested him to give me his autograph for my collection, he favoured me with the following flattering note:—

"My dear Dr. Muspratt,—I shall ever cherish with satisfaction and pleasure the kindness I have received in England; and in order to give my opinions double force, I take this opportunity of expressing them to you, in order that you may communicate them to your friends."

By his zeal and enterprise he educated many pupils who owe their success to his useful directions, and many are already distinguished for scientific discoveries which have confirmed the theories of their master. Dumas has earnestly sought occasion to bring forward those youthful inquirers to whose minds he had first given an impetus; and far from claiming their discoveries, which, in a great measure, belong to himself, he has eagerly aided them who owed to him alone their first development. In 1845, Thenard's health declining obliged him to resign the presidency in the Society for the Encouragement of Industry; Dumas succeeded him in the noble task of Director. On the 13th of May, 1849, Dumas was elected to the Legislative Assembly by an overwhelming majority. The President of the Republic called him, on the 31st of October, 1849, to join the administration, and entrusted him with the post of Minister of Agriculture and Commerce,

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where his chemical knowledge enabled him to render great service.

He has protected the national manufactures from the destruction which threatened them, and established the law relative to retiring pensions, and that affecting the principle of mutual assistance.

He originated annual meetings bearing on agriculture, commerce, and manufactures, in which the most important social questions for the future well-being of France have been discussed and elucidated; indeed, through his influence, the Board of Health have been obliged to depart from their established rules, which disturbed the relations of the people without adding to their security. When tranquillity is restored, the people being enabled to attend to their ordinary pursuits, society will rest upon its true basis; then, without doubt, Dumas will be considered as holding the first rank in that great movement which will place France foremost in civilization, the arts, and industry, among the nations of the earth.

In 1832, he was created Knight of the Legion of Honour; in 1840, Officer; and Commander in April 27th, 1849.

Professor Dumas is highly respected, and much beloved by all who have the honour of this acquaintance. In private life he enjoys a most estimable character. He has a wife and family; one of his sons, an intelligent young man, acts as his private secretary. Although this illustrious personage has added more to organic chemistry than any other man, save Liebig, yet his beautiful researches upon chloroform alone would have immortalized his name. Dumas combines a powerful imagination and a solid judgment; and in my opinion, what has been said of Davy might be applied to him, "If he had not been the leading chemist, he would be the first poet" of France.

NEGLECT OF TUITION IN MILITARY SURGERY.

We publish elsewhere an abstract of a lecture, introductory to a course of instruction in military surgery, recently delivered in the University of Edinburgh by Sir George Ballingall. The necessity of instruction in naval and military organization, before entering on the ordinary duties of medicine and surgery in the naval and military hospitals, has long been urged, with the most disinterested zeal and ability, by Sir George Ballingall, and we trust that, ere long, we may be enabled to congratulate that able professor on the full success of his endeavours, in the establishment of a Chair like his own in some one of the great schools of London.

So early as 1798, the late celebrated John Bell was so shocked with what he witnessed at Yarmouth, amongst the sick and wounded from the battle of Camperdown, that he addressed a most earnest and eloquent appeal to Earl Spencer, then First Lord of the Admiralty, on the necessity of a national system of education for medical officers. This memoir, dictated by genius and the impressions of the moment, was altogether complete in its provisions. It fixed and established what was good for the seaman and soldier, and what was fitting for the medical officer. It assured the authorities of the great truth, "that the expense would be repaid a hundredfold," while our naval and military surgeons, thus duly instructed and qualified, "would be more honoured then, than they are neglected now." This was said in 1798, and after fifty-three years we remain, so far as this great metropolis is concerned, without the desired instruction. John Bell was followed in 1803 by Robert Jackson; but these great men were not politicians. They had to struggle with the difficulties which in this country always attach to those who devote themselves to science.

To appeal to the authorities of the Admiralty and Horse Guards was, in those evil days, to beat the winds. Soldiers and seamen who fought and suffered as no men ever fought or suffered, might rot in foul barracks and more foul ships; but rotten boroughs, and all their most foul accompaniments, flourished! While everything that concerned the welfare of our fleets and armies was neglected, our defenders were liberally flogged!

Punishments were uniformly well looked to, while everything kind or considerate was invariably overlooked. "The barbarity of the English military code," says a great military authority, "excited public horror; the inequality of promotion created public discontent," and the claims of the most zealous and honourable officers were "neglected exactly in proportion to their want of that corrupt aristocratic influence which produced the evils complained of." If such was the helpless condition of the officers of the army, what prospect had the unfriended surgeons? The best of them had no power to do good, wanting that "position in the councils of command that is due to science."

How fared the medical concerns of the navy in those days of currupt influences?

Captain Brunton, speaking of the hospital of Devonport, says:—"Here was discovered waste, corruption, fraud, extravagance, and villany, to a disgusting extent." "Amongst the most extravagant contracts and profuse expenditure of the public money," says Lord Dundonald, "economy was the watchword. Economy in medicines was peculiarly enforced. Blue ointment and pills being requisite only for complaints that might be avoided, were issued in minimum quantity; so that for the cure of seamen so disordered, the captain or surgeon had to purchase those essential medicines, which were the more imperatively necessary in consequence of an order that no such complaint should be received in the hospitals! Even a more barbarous order than this was enforced: that in consequence of the expense of lint for washing wounds, sponges should be substituted, which, from being infected by application to tainted sores, cost the lives of some and the limbs of many."

The result of the cruel system which then held (1793—1813) in the navy was "a great and rapid decay in the physical powers of the seamen."...."According to the present practice," says Lord Dundonald, "decay, disease, incurable wounds, or death, can alone procure the release of any seaman" from the terrible contingencies of service which he describes.

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For the British seamen, the hospital afforded no place of safety or comfort—the invaliding station offered no ease. When "wholly unfit for active service," these noble fellows, in place of "being discharged and rewarded according to their merits and their sufferings," were "transferred to ships on harbour-duty," where petty officer and common seaman, youth and age, the worn-out and the wounded, were made "to perform a duty more laborious than that of the convict felons in the dock-yards, and with this remarkable distinction, that the labours of the latter have a known termination."

Now, we would ask, if medical officers like JACKSON and TROTTER had been placed at the head of their respective departments, with rank, station, and authority suited to the importance of those duties for which they were so thoroughly fit, with power to act according to the suggestions of their genius and experience, could such horrors have existed? We say emphatically—Never! With two such men at the head, and with a staff such as they would have instructed and organized, not all the negligence of successive Ministers—"ignorant even to ridicule" on everything relating to war—could have prevailed. In defending the interests of the soldier and seaman committed to their charge, JACKSON and TROTTER would have made themselves heard in the worst of times; or, failing that, they would have resigned their charge. Such men could not be smothered amongst the lumber and refuse of our public offices. JACKSON, indeed, when he found his representations disregarded by WILLIAM PITT, appealed to the public through the press, and this while wearing the British uniform!—a rare instance, in 1803, of moral courage. It is hardly necessary to say, that, in return for his services to the public, every endeavour was made to ruin him. Happily, peace brought us our M'GRIGOR and our BURNETT, with their large experiences of war; and the results, we trust, will be as lasting as beneficial to the two services.

In Asiatic phrase, what more need we say on the necessity, on grounds of state, for such a course of naval and military instruction as we here advocate? We hope, then, soon to have our chair of military surgery in London, and likewise duly qualified professors giving instruction in military medicine and surgery, from the general hospitals of the three presidencies of India.

EXAMINATION AT APOTHECARIES' HALL.

IN answer to numerous correspondents who have written to us upon the subject of the *Preliminary Examination* in Classics and Mathematics, at the Apothecaries' Hall, we have authority for stating, that however anxious the Court of Examiners are to promote the acquisition of preliminary knowledge among the rising members of the profession, they have no intention of inflicting injury upon existing interests, by passing regulations of a retrospective character; and that all those who have actually commenced their medical studies, by apprenticeship or otherwise, will be allowed, as heretofore, to pass the examination in CELSUS and GREGORY. We are assured, that when the new regulations are about to become compulsory, ample notice will be given to the profession and to the public; and that no intention exists of entrapping students unawares into an examination for which they had never been prepared.

But while thus allaying the fears of our correspondents as to the compulsory nature of the new examination, we should strongly advise all those who have received a moderately good education to submit themselves to the proposed ordeal, which appears to have been instituted solely upon public grounds. There cannot be any doubt that a youth who has lately come from school is far better fitted for passing an examination upon the ordinary subjects of scholastic education, than he is for translating the somewhat antiquated and technical Latinity of the strictly medical writers at the termination of his hospital studies. It is a notorious fact, that a great portion of those who are rejected at the Hall are sent back to their studies from their ignorance of the Latin language; and it would surely be better to avoid this catastrophe by passing an examination in earlier years, while the knowledge of the classics and mathematics has not yet entirely slipped from the memory, and before the commencement of the really practical studies of the profession.

MESMERISM IN EDINBURGH.

WE have received at the same time two books from Edinburgh, written by two professors of the University, on the subject of Mesmerism, but composed in a widely different spirit. To both we have very grave objections. The first, by Dr. JOHN HUGHES BENNETT, is learned and ingenious, but falls into the cardinal error of admitting the truth of many of the pretended mesmeric phenomena, and commits the still more grievous mistake of recommending to practising physicians, if not this, at least a very analogous form of quackery We really did not believe we should see it stated, by a man whose name stands deservedly high, that these mummeries are "a worthy commencement in the rational treatment of disorders." But we should not desire to give a wholly unfavourable opinion of the *brochure* of Dr. BENNETT. Though blameable in its conclusions, and less manly and straightforward than we might have expected, it does not altogether fall beneath the dignity of science, and the ingenuity of its reasoning will at least interest, if not instruct, the reader.

We need not say the other book is by Dr. GREGORY. Out of chemistry, this physician seems weak almost to silliness. In all the qualities which distinguish Dr. BENNETT, even in his errors, his colleague is lamentably deficient. The genius which was hereditary in this gentleman's family for a couple of centuries seems to have expired in him. He swallows the mesmeric marvels without difficulty, clairvoyance and all. Just as country girls are practised on by gipsies and fortune-tellers, so is this credulous person deceiv-

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ed by every one speaking in the name of mesmerism. There is no kind or amount of imposture of which he does not become the ready tool and victim. He finds no difficulty in giving implicit credit to statements, belief in which argues a total disbelief of all knowledge, human and divine, for they go the entire length of sapping the foundations of all science, and rejecting all testimony, in order to accept the idle tales of artful boys and girls, who would be well cured of their prophecyings by a sound whipping at the cart's tail.

We regret to speak of Dr. GREGORY with anything like disrespect, because we believe his credulity real, and his foolish doings to be at least honest and earnest. But we cannot deal with such errors as his merely in the way of solid argument. When men depart from the paths of science, to associate themselves with the idle sycophants of philosophy, scorn and ridicule are necessary weapons of punishment. We have unfortunately many amongst us who dislike, or are unequal to, the labour of thought and investigation, yet who are greedy of applause. Such men, despairing of the approbation of the wise, deliver themselves up to toadyism, and if they cannot merit commendation from men, will seek for credit with elderly ladies. Dr. GREGORY no doubt flatters himself with the idea of candour and openness to truth. Other men will only see an exhibition of indolence. But he must not bring amongst the hard workers of medicine his idle companions. If he will lie in the lap of CALYPSO, let him leave the halls of science, for there ought to be no place there for mere Dousterswivels.

In America, we see that the rhodomontade which seems reasonable truth to Dr. GREGORY has been developed into the creed of a religious sect—the Rappists—who are far more blasphemous and absurd than the Mormonites. These people not only receive the ordinary humbug of mesmerism, but go on to clairvoyance, soothsaying, and prophecy. They profess to have intercourse with the dead of all ages, with saints, prophets, and apostles, and to commune directly with GOD himself. One of the religious journals of these fanatics is advertised as being edited by the twelve Apostles, to whom the sub-editors act as amanuenses. Another mesmerist is busily engaged in writing the mesmeric life of CHRIST.—To such fearful blasphemies has this extravagance at length grown! But in its most extravagant shapes, it is but the natural and necessary development of those horrible teachings which have been so rife in London during the last fifteen years, and in which certain men, fools or knaves, belonging to our own profession, have played a large and disgraceful part.

REGULAR AND IRREGULAR PRACTITIONERS.

WE have endeavoured, in previous numbers of this journal, to rouse the great republic of doctors to a sense of the monstrous laxity of opinion and conduct which has prevailed in the highest quarters of the profession, on the subject of irregular practice. We have reason to believe that we have not unsuccessfully done so; that the culprits are more observant of themselves, and if not grown better are at least more prudent. But we tell them again, mere prudence will not satisfy us; our vow is made to extirpate without mercy this low-toned behaviour. We will not invade, without a paramount necessity, the sanctity of private practice, and we will never write aught either in malice or without the sanction of sufficient evidence; but nothing shall stay us in purifying the profession from the evil and foul stain of quackery. In their own proper place, degraded among other impostors, the mesmerists and homœopaths are beneath our notice, and escape through contempt. It is in what is called the higher, but which we would rather call the idle, rank of life that this evil receives its chief encouragement. The complaisant doctors who wait on the caprice of our pampered gentry, forgetting their great vocation in the pursuit of a trade, give a learned countenance to that which, though noxious and criminal, is often only a pastime for very silly unoccupied people. But neither coroneted fops nor ladies of fashion shall raise quackery into the rank of a profession, far less intrude the lacqueys of their leisure among physicians; and the sycophants who assist them shall be branded with shame and pursued without cease and without pity. It is not easy to conceive an honest homœopath. Such psychological curiosity may, however, exist in weak-brained man or ignorant silly woman. But there is no doubt about the regular physician who consults with such a creature, whether idiot or knave. His case is one of palpable dishonour. He betrays his patient by suppressing the truth and countenancing a lie; he takes money under false pretences; and as far as he can, in his own person, vilifies a great profession. Such things have been tolerated much too long, but shall now be purged out by all means that truth and honour permit; and we are bound by every manly and upright feeling, first to question those whose elevated station enables them to diffuse more widely the evil of their bad example, and whose greater prosperity, exposing them to less seduction, marks the more strongly an inherent baseness of character.

But neither are those persons to be held blameless, who, in circumstances which should elicit feeling and call forth censure, indolently consult their own ease, and remain silent. We mean to call on all men for active assistance; and first of all we inquire, what has the Faculty of Medicine of the University of Edinburgh done? We know the individuals of which it is composed plead want of power. This is but a sneaking excuse for want of a strong will. It shall not avail them! They can do what we do: they can speak. Failing to do so, they must be told that a Faculty of Medicine, which has not the faculty of speech, when the honour of the medical profession is concerned, when their own respectability is compromised, and the prosperity of their school is at

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stake, is but a form without substance, a frothy distinction which, however it may satisfy the vanity of its members, but thinly films over contempt dogging the steps of cowardice and premature decrepitude.

But they must be told more than this. They must learn that the repose they covet will not be given them. We shall do our duty without fear and without blenching; and if the disorders which have disgraced and dispersed other schools light among them, let them seek the cause in their own sleepy and callous indifference to all that is true and honourable. The rights of the students are invaded, their time is wasted, and their minds are misled, when a perverted teacher is placed over them. The interests of a great school must not be bartered away to promote the designs of the dishonest, or give rest to the indolent. The perverted must be denounced, then excluded. If a plain invitation to resign functions which cannot be honestly discharged, be resisted, then social as well as professional banishment must follow. No intercourse whatever can be held, no terms must be kept, with men who are slack in understanding what honour and duty so plainly require, and are willing to live under a load of obloquy and shame. If the medical faculty of the University of Edinburgh would give us but a small part of the earnestness, to rid themselves of an unworthy colleague, which they have lately shown to clutch the income of the chair of music, there would be no need of lawyers or legislation for the purpose.

CRIMINAL REFORM.

THE reformation of criminals, and the punishment of crime with a view to its prevention, constitute some of the most important inquiries which can occupy the mind of a philanthropist or legislator. Feeling great interest in such questions, and considering members of the medical profession to be peculiarly qualified, from their practical experience and knowledge of human nature, to contribute much valuable information respecting various points connected with the subjects now mooted, we again resume the discussion of "prison discipline," adverted to in a recent leading article; the more especially as human life seemed considered of so little value, in times not very remote, that the punishment of death was often inflicted, not only for the slightest, but even for imaginary crimes. In England, for instance, historians report that 80,000 witches were executed during the first eighty years of the seventeenth century, 6000 of whom, according to Dr. Grey, suffered during the Long Parliament. Again, in Scotland, matters were equally bad. It is stated, that during the thirty-nine years previous to the accession of James VI., or in the reign of Queen Mary, upwards of 17,000 persons were executed as witches by the judicial authorities of the country. But in modern days, and even so late as the present century, the taking away of life by law was still considerable, since it appears, from the 1st January, 1800, to the 31st December, 1845, not less than 2139 individuals were hanged, in England, for various crimes. Great Britain, however, was not the only country where such sanguinary proceedings were perpetrated, as elsewhere matters were worse. Numerous examples might be easily quoted; but one will now suffice, given on the authority of Macairo, who says, that in the principality of Treves, 6500 persons accused of sorcery were executed in the course of a few years; and this at a time when barbarism was not universal. Contrasted with the above horrible details, it is pleasing to ascertain, from official documents, that the whole number of executions throughout England and Wales, during the five years ending Dec. 31, 1849, amounted to fifty-three; all being for crimes against the person, and not against property, even in a single instance; which was very frequently the case formerly. In reference to this point, however, it well deserves notice, that the above number of executions, although large, was considerably less than half the amount reported during the period of only *one* year, at the early part of the present century—namely, in 1813, when 120 human beings were actually launched into eternity by the hands of the hangman, and some for offences which would be now punished by limited imprisonment or transportation.

Having last week shown, from the records of Bethlem Hospital, the baneful influence often produced upon the minds of criminals by the system recently pursued in certain prisons, we would now advert to another feature too often manifested amongst prisoners undergoing solitary or separate confinement—viz., the propensity to commit suicide. To illustrate this important phase in the annals of crime, we would refer to the experience obtained in France respecting the direful effects engendered amongst the criminals of that country by the discipline pursued in central prisons, contrasted with that adopted towards "forçats," or galley-slaves, the former class of prisoners being confined in separate or solitary cells, whilst the latter, although often heavily ironed, work very generally in gangs, in the open air, accompanied by a military guard, and with whom they sometimes converse, as, likewise, with bystanders; besides having other distractions, which materially alleviate the poignancy of their captivity. To show the injurious effects confinement in prison has upon the inmates, in reference to suicide, compared with the free portion of the population, it may be stated, as an argument, that amongst the latter class, in France, one instance of self-murder occurs in every 11,589 individuals; whereas, amongst the residents of gaols, the ratio is one suicide to every 3165 persons coming within that category; hence giving four times more cases of self-destruction amongst prisoners than the free population. But the inmates of prisons furnish even a larger proportion of suicides than the galley-slaves, in the three depôts of France. Thus, amongst a mean population of 15,111 prisoners, confined in the "Maisons centrales" of that country, thirty suicides were reported during a period of seven years, terminating the 31st of

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December, 1846; whilst, during six years ending December, 1845, amongst a medium population of 7041 "forçats," only five cases of a similar description were recorded, or nearly one-third the previous ratio, speaking comparatively,—the proportion being one suicide in every 503 prisoners confined within stone walls or in cells; and only one case amongst every 1408 residents in the "Bagnes" of France. These figures speak unequivocally respecting the mischievous tendencies of rigid confinement in gaols, and well deserve the most serious attention both of legislators and philanthropists desirous of checking crime, yet zealous in promoting the improvement of criminals.

Other matters illustrative of the effects of modern prison discipline, deserve remark; but space prevents our now entering further upon such investigations. However, respecting the punishment of offenders, we do think the system at present adopted is often too uniform for different criminals, since it then ceases to be equal for all; whereby the mental and bodily health of many are thus injuriously affected, without producing beneficial reformation. In short, convicts are thereby sometimes made idiots, not reformed prisoners; whilst the discipline enforced in some prisons, like the bed of Procrustes, is too often made subservient to a pre-conceived yet dangerous principle of uniformity, totally inconsistent with the complex nature of frail humanity.

MESMERIC HUMBUG AND QUACKERY.

THE severity of our strictures on Homœopathy and Mesmerism have met with very general concurrence on the part of the profession. We have only, it is proved, expressed plainly and firmly, opinions which had already found place in the minds of all men who can see and understand what is going on in the profession. The indignation is general at the exhibitions of folly and fraud which the so-called guardians of science have permitted. If we blame ourselves at all in this matter, it is not for having expressed ourselves unmistakably at last, but for too long delaying the correction which has been so richly deserved.

But we have heard one objection to the tenour of our recent anti-quackery articles, which requires notice and answer. It is said that we would raise medical corporations into judges of the correctness of medical opinions, and attempt to establish a standard of orthodoxy in the profession. The whole history of THE LANCET is a sufficient reply to this. Who has warred more earnestly against the unjust pretensions and pride of our corporations than ourselves? Most assuredly we see no qualifications for such an office in the colleges as now constituted. But had they even higher qualifications for so distinguished a function, the evil of such an attempt would be all the greater. Unlike the sister faculties of Jurisprudence and Theology, Medicine exists and flourishes only in unlimited freedom. It was in former ages long tied down to a standard of opinion. From the writings of HIPPOCRATES no deviation was tolerated. But those were days of stagnation and ignorance, made memorable by the well merited-satire of MOLIERE. God forbid we should ever fall back into such pedantry and folly!

It is because homœopathy and mesmerism have no place whatever in science, that we call upon our Colleges to make use of the powers entrusted to them. It is because these quackeries are synonymous with folly, fraud, and crime, that we call upon our Colleges to act. It is because they are dishonouring, because they are used by knaves to entrap the credulous and the ignorant, that we insist they shall not be practised within the limits and under the garb of the profession. Let the Hendersons, the Gregorys, the Elliotsons and the Ashburnams leave us, and we are content. With the Quins, the Culverwells, the Courtenays, the Morisons, the Dicksons, and the Holloways, they would be in their proper places; and if Lords and Ladies love to consort with such, we shall bestow upon patron and quack nothing more formidable than contempt. But it is a wilful perversion of the question to represent such advocacy as this as tending in the smallest degree to limit the freedom of medical inquiry, or to erect that impossible thing—a standard of medical orthodoxy. We would not allow to quackery even the humblest place in medical science. We would not wish freedom of opinion to be ventilated in such odious haunts. We denounced it as fraud, and pursue it as such. But we may be asked to define what is quackery. We answer practically, homœopathy and mesmerism are such. This is sufficient for our present end. It may very well for Dr. HENDERSON to assure us that he is within the pale of legitimate belief. In this he only practises an art well known to offenders. No one cries so loud as the smuggler, that his is the only real free-trade.

But it is the countenance given to these men which constitutes the real mischief. When the ignorant and unwary see them sitting in places of honour,—when they are confounded in public estimation with the regular faculty, and admitted to terms of confraternity by those apparently engaged in the regular practice of medicine,—their sphere of mischief is mightily extended. This seemed to be acknowledged, indirectly, even in Dr. HENDERSON'S letter. He boasted that Homœopathy had attained such strength, that she could now walk alone. This, surely, was tantamount to an acknowledgment that she had hitherto leant on the support given her by the President of the College of Physicians of Edinburgh and others, who have, it seems, forgotten what was due to truth, their profession, and themselves. We do not believe in this insolent boast of Dr. HENDERSON'S. It is our task to prove to him his miscalculation—that he has caught a shadow, and lost the substance he might have had, had he walked more warily. The public will always adhere, in the long run, to what is true and genuine, unless cunningly misled, and they will, we firmly believe, soon abandon homœopathy, if this humbug be left to itself. But so long as its practitioners get their blunders and murders sealed and sanctioned by

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physicians and surgeons of name and note, the public is most foully betrayed.

Of mesmerism we would not speak with any more charity than of homœopathy. There are circumstances, indeed, particularly when practised by the sexes, which render it even more censurable. Both have their foundations in folly and falsehood, and end in pranks the most ludicrous and contemptible. Mesmerism is also the longer lived of the two, for it alleges in its favour certain long known but obscure nervous phenomena of which physicians have not been able to give any reasonable account. Though its arrogant pretensions and gross falsehoods have often been detected and exposed, and though it has been made infamous for a time, yet its Cagliostros, allured by the love of gain, at each succeeding age return upon our hands. This must probably be the case to some extent, as long as wealth and power are in the possession of very feeble individuals. The exposures of former times have no influence with the credulous and silly people of the day. Even the recent discovery of the imposition practised on poor Miss MARTINEAU has not restrained the ardour of such people, and has not restored anything like candour to that lady herself, who, assuming the place of Goddess of Reason, repudiates belief in things which obtain the assent of the great majority of her fellow-creatures, and yet falls an easy prey to the artifices of a cunning country girl, and of tricks worthy, or rather unworthy, of MM. DOBLER and ROBIN.

Before leaving this trite subject, we would call the attention of our readers to two signal exposures of this fraud which have lately occurred.—Dr. GREGORY's late very silly book contained the dreams and revelations of another artful peasant, who held communion with Sir JOHN FRANKLIN and his companions in the Arctic Ocean. In her visions she described their hunger, cold, and sorrow, and even the Gospel they were reading. All this was safe ground in the case of men who we fear will not return from the grave to convict her. But, encouraged by the admiration of the worshippers around her, the hysterical damsel proceeded to announce the arrival of the ships of discovery, and the meeting of Sir JOHN FRANKLIN and Captain AUSTIN, with the relief of our long-lost countrymen. The sheets of Dr. GREGORY's book were hardly yet dry, when accounts reached England which seem to leave little doubt that FRANKLIN and his brave crew have perished miserably in Lancaster Sound, undiscovered and unrelieved.

In the Memoirs of COUNT DE LA MARKE lately published, it is related that MIRABEAU warned the unfortunate LOUIS XVI. of his approaching fate, and strongly recommended a plan for his flight, which would probably have succeeded.—The King listened to the warning and advice, but was induced to reject both, and resist the entreaties of his family, at the instigation of a German quack, who, in his mesmeric trances, promised the restoration of his Majesty's power and dignity—a promise fulfilled by his speedy execution. But what matters the experience of mankind and the lessons of history to men who are brought to believe, that, with eyes to see, we can read with our toes; that the order of creation can be perverted at the bidding of an impotent quack; and that revelations exceeding those of the Gospel can be made by an hysterical and mendacious child.

Reviews and Notices of Books.

The Teeth, and their Preservation in Infancy and Manhood to Old Age. By ALFRED CANTON, M.R.C.S. E., Dental Surgeon to Charing-cross Hospital. Fcp. 8vo, pp. 208. London: Bailliere.

IT is a curious circumstance, in connexion with the dental art, that in proportion to the advance which has of late years been made towards its more scientific practice, and in the successful cultivation of the incidental histologic anatomy and physiology, pretension and quackery, like rank weeds, have overrun the ground, and choked up, by their foul luxuriance, the fair field of legitimate endeavour. Charlatanism here runs riot, and ignorance, like the ass in the fable, conceals itself in the lion's skin The author of the little volume before us inveighs urgently against the deception, and candidly offers a remedy, by suggesting that all dentists should be obliged to possess the diploma of the College of Surgeons. In this view we perfectly coincide; it is a protection which the public demands; and Mr. A. Canton has done good service to the cause by his strong advocacy of the plan in his Introductory Chapter, where he clearly shows how a far greater share of medical knowledge is required of the dentist than it is usually supposed he is called upon to possess.

The "Preservation of the Teeth" is a title of much import, and we are led from it to expect great things, though compressed within the compass of a small book. We shall endeavour to show how far the author has justly raised our expectations.

In the second and three following chapters, the minute anatomy of the teeth is given, and their physiology explained, at the same time that much and deserved stress is laid upon the fact, that it is to the early or formative periods we must direct particular attention, with a view, through care of the health of the mother, to secure to her offspring a well-developed set of teeth hereafter. The root of evil is laid bare—the *fons et origo mali* exposed. This important point we do not remember to have seen receive so much consideration as Mr. Canton has given it, and is one to which more space might be advantageously devoted in a larger volume. The account of the diseases incidental to the first and second dentition is clearly and forcibly written; the subject is one of paramount importance, and could not be treated of cursorily; whilst that bugbear of nurses and dread to parents, the gum-lancet, is made to assume a prominent position in the *armamentarium chirurgicum*. Scarification of the infant gums is regarded still,

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by many, as a barbarous interference with nature's operations; but we would recommend the unbelievers to a perusal of Mr. Canton's exposition of its advantages. The discussion is one of no slight significance—it is a question to be determined, often, between life and death.

In Chapter V., Decay, its Causes, Prevention, and Treatment, are considered; and whilst theory is glanced at, practical points are mainly entered upon. Were authors more prone to follow this plan, and make hypothesis hold a second rank, mankind would be the gainers. The last chapter embodies an account of other diseases of the teeth, the various operations to be performed upon them; the irregularities they sometimes present, and the mechanical appliances invented to benefit them. In this portion of the work there is much contained in a small space; words are economized without information being curtailed. An appendix of formulæ for lotions, powders, &c., completes the volume.

To all who take an interest in the welfare of the teeth—and who does not?—we may fairly recommend a persual of this little book. It is written in a plain style, and the contained information has due regard to science whilst it is directed to the non-professional reader. The art of compounding this useful intermixture is difficult to accomplish; it has failed in the hands of many, whilst, through the skill of some (as Dr. Arnold, Dr. Roget, Dr. Coombe, and Mr. A. Canton) it has completely succeeded.

A Voyage to India, China, and Singapore. By Dr. Berncastle. Two vols., 8vo. London: Shoberl. 1850.

The author of these two volumes has given us a very interesting detail of a voyage to parts of the world which offer to the reading public much that is new. Those who are about to visit the dominions of the East, and the land so newly opened to the inquiring Englishman, China, will find many suggestions which they will do well to adopt. Dr. Berncastle seems to have entered freely into the spirit of the situations where his active desire for knowledge led him. To the simple reader, the graphic descriptions of the peregrinations of the author will convey all the amusement of a personal visit. It is not to the general reader alone, however, that their value is reserved; details having reference to medical subjects are dispersed through the volumes, which give an insight into the way in which professional matters are conducted in the East.

At the Cape of Good Hope Dr. Berncastle visited some patients affected with elephantiasis, there called leprosy, and considered by the natives as contagious, but not so by the medical practitioners; it appears to be confined to the native people of colour.

At Bombay the author visited the Sir Jamsetjee Jeejeebhoy Hospital, and the Grand Medical College attached to it. The former institution is capable of holding between two and three hundred patients. The men are disposed on one side and the women on the other, and every attention and consideration are paid to the religious and domestic peculiarities of the various sects. The patients bear operations well, on account of their sober habits and simple vegetable diet. The Parsee hospital consists of a large square yard, surrounded by a high wall, and is used as an hospital for animals; it is due to the tenets of the Parsee creed, and must be a most singular exhibition. Our author says:—

"In these sheds, separated from each other, are horses, cows, buffaloes, donkeys, goats, sheep, dogs, cats, and a variety of other animals, some with broken legs or dislocated joints, others blind and tottering from old age. At one end are coops for poultry of all descriptions, cages for parrots and various birds, with their attendants, giving it altogether an appearance something between a farm-yard and a menagerie."

At Poona there is a native hospital, in which there were some cases of guinea-worm or dracunculus when visited by the author. On leaving India, he stretched across the Indian Ocean and the China Sea to Canton; here Dr. Parker's Hospital administers to the relief of great numbers of patients afflicted with cataract, ectropium, ptosis, and other diseases of the eye; tumours of enormous size are very common.

We here meet also with the small and crippled feet of the Chinese ladies, of which Dr. Berncastle gives an interesting description, and an amusing reason of a Chinese mother for insisting on her daughter's submission to this long course of pain and suffering:—"Suppose he no small foot, no man wantjee make he number one wife."

After a second short visit to "the Cape," Dr. Bernecastle returned to England.

In dismissing these volumes, we do so with the conviction that, both to the medical and general reader, their perusal will while away many an hour both with amusement and instruction.

Homœopathy Unveiled; or, Observations on Hahnemann, his Doctrines and Treatment of Disease. By William Perrin Brodribb, M.R.C.S.E., Member of the Court of Examiners of the Society of Apothecaries. London: S. Highley, Fleet-street. 1851.

At the present time, when the humbug which passes under the name of homœopathy is so widely spread among the community, and, honestly or dishonestly, is practised by too many renegade members of the profession, it is refreshing to peruse a book, which, by dint of calm reasoning and convincing argument, lays bare the utter fallacy of this monstrous absurdity. For ourselves, we confess that we are so disgusted with the puerilities and tricks of Hahnemann and his followers, that we think them hardly worthy of a serious notice, and would be willing to let them glide quietly into oblivion, as they soon must do from their inherent knavery; but experience has taught us that the multitude are ready to be deluded by the most flagrant nonsense, and that it is necessary occasionally for rational men to take up their pens for the purpose of stemming the torrent of wild and ridiculous theories, which are,

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from time to time, palmed upon the public mind as the emanations of elaborate thought and superior wisdom.

In this spirit, the little work before us has been written, and Mr. Brodribb deserves credit, not only for the luminous and concise manner in which his arguments are arranged, but also for the temper and moderation with which he has treated a subject which might justly excuse the employment of ridicule and the expression of contempt.

Mr. Brodribb has done what many other practitioners have done before him—namely, he has taken the globules himself, and of course without perceiving any symptoms whatever:

"I have taken," says he, "daily, for a fortnight, some globules of rhus toxicodendron, varying in number from four to thirty. I have taken also, for the same period, globules of nux vomica, of aconite, of pulsatilla, of mercurius, and of arsenic, and on each occasion without feeling the slightest effect whatever. Desirous of testing them as fairly as possible, I have requested homœopathic practitioners to give me any of their medicines, offering to take them in any dose, and for any length of time they pleased, *but these offers have always been declined.*"

We cannot, perhaps, wonder that Mr. Brodribb's very reasonable *experimentum crucis* should be declined by a clique of pseudo-philosophers, to whom the ordinary rules of reasoning appear to be wholly unknown, and to whom the *novum organum* of Bacon is a sealed book!

On Diseases of the Mucous Membrane of the Throat, and their Treatment by Topical Medication. By W. R. Wagstaff, M.D. 8vo, pp. 183. London.

Some few months since, we reviewed somewhat fully a work on the treatment of diseases of the air-passages, by local applications to the mucous membrane of the affected parts. At that time we went fully into the mode employed by the author, Dr. Horace Green, and spoke of it in terms of approbation. Dr. Wagstaff's little work contains nothing very original or striking, and we think it was scarcely necessary for him to have taken the trouble to manufacture a work expressly to inform us that he is a disciple of Dr. Green. A short anecdote here may not be out of place. Mr. Burke and a merchant were candidates to represent the old city of the West. Mr. Burke addressed his constituents with his usual eloquence and power; his colleague, with as much good taste as good sense, merely remarked, "I say ditto to Mr. Burke, gentlemen—I say ditto to Mr. Burke!"

We have no wish, however, to disparage Dr. Wagstaff's unpretending volume, which conveys in a simple and concise manner the principles on which Dr. Green's plan is founded, and the practice to be pursued.

The Laws of Health in Relation to Mind and Body. A Series of Letters from an Old Practitioner to a Patient. By Lionel John Beale, M.R.C.S. 8vo, pp. 308. London.

We gladly welcome Mr. Beale's work. At the present time, when quackery is rampant, and when, as Goldsmith well remarked, "every man professes to be able to mend the constitution and to cure his neighbour," such works as the one before us are calculated to confer great benefits on the community. It is from the spread of knowledge such as the work of Mr. Beale will communicate, that we must expect to stem the torrent of empiricism; for the quack-deluded are ever as ignorant as they are conceited. An analysis of the "Laws of Health" would exceed the limits which our crowded columns at present allow for notices; it will suffice, then, to say that it contains a most elaborate but familiar account of the laws which regulate the economy from the cradle to the grave. The observations are those of a most experienced and intelligent practitioner, and they do equal credit to his head and heart.—It is not only to the lay reader that Mr. Beale's work will be acceptable, and we augur for it an extensive popularity.

A Compendium of Materia Medica and Pharmacy, adapted to the London Pharmacopœia, embodying the New French, American and Indian Medicines, and also comprising a Summary of Practical Toxicology. By J. Hunter Lane, M.D. Fcp., 8vo, pp. 310. London. Second Edition.

The issue of the new Pharmacopœia has rendered it necessary for Dr. Hunter Lane to bring out a new edition of his "Compendium." Of the first edition we spoke favourably as a careful and useful compilation. The present edition embraces all the new medicines, and will be found useful in the dispensary of the practitioner and the shop of the druggist.

The Wisdom and Beneficence of the Almighty as Displayed in the Sense of Vision. (The Actonian Prize Treatise for 1851.) By T. Wharton Jones, F.R.S. Fcp., 8vo, pp. 135. London.

This may be called a Bridgewater Treatise in miniature, and is really a most interesting little work. The whole matters relating to the organization and functions of the eye are treated in a masterly manner, but in a most familiar and pleasing style. To the young in particular Mr. Wharton Jones's Actonian Prize Treatise will be most acceptable, and we think that neither family nor school should be without it.

Elements of Materia Medica, comprising the Chemistry and Natural History of Drugs, their Effects, Doses, and Adulterations, with the Preparations of the British Pharmacopœia. By William Frazer, M.D. Fcp., pp. 466. London: H. Bailliere. Dublin: Fannin & Co.

This will prove a useful work to students, dispensers of medicines, and the practitioners of medicine. The title sufficiently explains the nature of the work, and the manner in which it is executed entitles it to be regarded as a useful addition to our works of reference.

Dr. Koreff, a physician, well known in Paris, died a few days ago from an apoplectic attack. He left his home in the morning in his usual health, was seized as he entered the room of one of his patients, and immediately expired.

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Clinical Lectures
ON
DISEASES OF THE CHEST.

Delivered at the Hospital for Consumption and Diseases of the Chest.

By THEOPHILUS THOMPSON, M.D.,F.R.S.,
PHYSICIAN TO THE HOSPITAL.

LECTURE I.

Importance of general symptoms. Physical signs. Hooke, in the seventeenth century, the proposer of auscultation. Laennec. Importance of visible signs. Hydatids expectorated. Cracked-pipkin sound. Modifications of movement of chest by phthisis. Pleurisy. Emphysema. Causes and treatment of asthma.

The hospital in which I have the honour of addressing you was founded for the relief of individuals suffering from a class of diseases, to which more than one-sixth of the annual mortality in this country is attributable. The opportunity for studying this class of diseases has hitherto been lamentably deficient, and no argument can be requisite to prove the desirableness of rendering this institution available for the communication of knowledge on the subjects which it is specially adapted to illustrate. With this impression, it has been determined to deliver a course of clinical lectures; and whilst conscious of my own deficiency for the share of the task which I have undertaken, I am encouraged by the reflection, that my duty is not so much to communicate opinions as to assist you in the observation of facts, and by the conviction that knowledge acquired by your own attention, and made to fructify by the energy of your own mind, will take root with more certainty, and prove more productive, than any opinions which I might attempt to transfer to you complete and mature.

Let me remind you, at the onset, that lectures on the diseases of the chest involve far wider considerations than those connected with the science of auscultation alone. The probable duration of the disease, and the chances of its relief, have no exclusive relation to the extent of the local physical conditions. The various circumstances which characterize or modify the general constitutional state of the individual patient must be carefully considered before we can form a reasonable prognosis, or adopt a judicious treatment. Nevertheless, the various modes of physical investigation will, with propriety, engage a large proportion of attention, for it will well repay your careful study, and will lose its seeming complication, only by the devotion of patient care.

The systematic application of the ear to the investigation of thoracic diseases is of modern introduction; but it is not generally known that the suggestion of such a method of inquiry was really made by one of our own countrymen, about two centuries ago.

Robert Hooke, surveyor to the city of London in the middle of the seventeenth century, who is said to have been the inventor of spring watches, and even in his boyhood to have exhibited great ingenuity in the construction of clocks, records his opinion that some modes of ascertaining the condition of the works of machinery might be extended with advantage to the investigation of the mechanism of animal life. The passage is worth your attention, and is at once so philosophical and definite, that you will probably feel some surprise that such a suggestion should have remained so long unnoticed.

"There may be a possibility," says Hooke, "of discovering the internal motions and actions of bodies by the sound they make. Who knows but that as in a watch we may hear the beating of the balance, and the running of the wheels, and the striking of the hammers, and the grating of the teeth, and a multitude of other noises—who knows, I say, but that it may be possible to discover the motions of internal parts of bodies, whether animal, vegetable or mineral, by the sounds they make; that one may discover the works performed in the several offices and shops of a man's body, and thereby discover what engine is out of order, what works are going on at several times, and lie still at others, and the like. I have this encouragement, not to think all these things impossible, though never so much derided by the generality of men, and never so seemingly mad, foolish, and fantastic, that as the thinking them impossible cannot much improve my knowledge, so the believing them possible may perhaps be an occasion for taking notice of such things as another would pass by without regard as useless. And somewhat more of encouragement I have also from experience, that I have been able to hear very plainly the beating of a man's heart; and 'tis common to hear the motion of the wind to and fro in the guts and other small vessels; the stopping of the lungs is easily discovered by the wheezing. As to the motions of the parts one among the other, to their becoming sensible, they require either that their motions be increased, or that the organ be made more nice and powerful, to sensate and distinguish them as they are; for the doing of both which, I think it is not impossible but that in many cases there may be helps found."

It may be interesting to you to hear a few particulars of this ingenious philosopher, a short notice of whom may not be thought inappropriate to the occasion of our meeting.

Robert Hooke was born in 1635, and died in 1702. He was intended for the church, but a liability to headache interrupted his studies; and on attempting to become a painter, under the instruction of Sir Peter Lely, the same affliction, aggravated by the smell of paint, again changed his destination. He was for a time pupil to Dr. Busby. In 1655, he assisted Dr. Willis in his chemical illustrations at Oxford, and probably took a part in constructing the first air-pump, introduced by that eminent philosopher, Mr. Boyle.

The above commencement of Dr. Thompson's Lectures was not received from London in time for place in the proper department of this reprint.—Am. Ed.

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He started some ideas regarding gravitation, approaching so nearly to those which immortalized Sir Isaac Newton, that this great man, with the ingenuousness of true philosophy, gave Hooke full credit for an approximation to that great discovery.

Robert Hooke, in his suggestions for an improved plan of building London, may be said to have anticipated some important measures of sanitary reform. He obtained through Cornelius Drebbel the first microscope used in England, and in 1629 discovered the cellular structure of plants, applying to the separate cells the name of utriculi. It is remarkable how little additional knowledge of importance was attained in this direction until 1833, when Robert Brown, in his work on Orchideæ, described the cytoblastema, or cell nucleus.

You will agree with me that Dr. Tillotson, the Archbishop of Canterbury, exercised a sound discretion in making Hooke, by patent, Doctor of Medicine.

This short account of the observations and intellectual character of Hooke, will not be unseasonable, if it serve to impress you with the conviction, appreciating as we do the ingenuity of his suggestions of helps to auscultation of the living body, that the rules for physical investigation are not arbitrary and mystical, but distinctly deducible from scientific laws.

The credit fairly due to Hooke in no measure detracts from the merit of Laennec. That distinguished physician,—with scarcely a hint to help him from previous observers, excepting an erroneous statement of Hippocrates, that a sound like boiling water could be heard in the chest of patients with watery effusion, and also a general remark by Double, the author of the Semeiologie,—in two short years of observation produced the first edition of that immortal work on Diseases of the Chest, which constitutes the solid groundwork of our knowledge of thoracic diagnosis. Laennec however was fallible, and made one important error: engrossed too much with the instruction derived through the ear, he disregarded the information obvious to the eye. To the great value of indications afforded by inspection, let me now make it the object of this lecture to call your special attention. The two sides of the chest, when in the healthy condition, appear symmetrical in form, and similar in movement. A change in these respects, obvious to the practised eye, is usually induced by any serious disease of the lungs or pleura. Let me show you proofs of this statement.

The patient now before you was sent into this hospital under the idea that "one lung was gone from consumption." But although he had rapidly become thin, suffered from profuse night perspirations, and expectorated great quantities of "purulent matter," the aspect of the chest made me doubt the correctness of the opinion. You see that during inspiration the expansion on the two sides is equal, and that it is quite free even in the sub-clavicular regions. Your eye witnesses truly.

This patient, George S——, aged eighteen, a musician, is of phlegmatic temperament and orderly habits, but obliged, by his profession, to keep late hours. He was admitted Nov. 5th, 1850. At the age of six, and several times subsequently, he is said to have had considerable enlargement in the region of the liver, which subsided, but seventeen months since recurred to an unusual extent, and did not yield to remedies.—About eight months ago, he had violent attacks of cough, attended with expectoration of frothy yellow matter; in about three days the humour subsided, but he still continued to expectorate; the expectoration containing pieces of skin which he compares to gooseberry husks. Five months ago, fresh exasperation of his cough occurred, with expectoration of bags of humour "the size of a chesnut. When the cough was tolerably easy, these bags came up whole; when the cough was hard, they broke, their contents being first ejected, and their skins afterwards." He asserts that he could feel the bags come from the region of the liver. About two months since, fresh exasperation of his cough occurred, with imminent danger of suffocation. He says he felt a tearing sensation about the liver, as if something required to be ejected.

He soon began to throw up skins and a piece of what he called gut, about a foot long, and was obliged to tear these from his mouth to prevent suffocation. A week afterwards he had a fresh attack of cough, with expectoration of matter like yellow jelly covered with blood. He then brought up several pieces of shrivelled reddish skin, which, when stretched out, would each have covered the fist. There was more blood mixed with them this time than before. For three or four days after, he continued spitting up a reddish humour containing small fragments of skin. Five weeks ago, during a period of two days, he spat up a large quantity of black congealed blood. Three days previously, and two days subsequently, to his admission, he expectorated a peculiar peach-coloured matter, which, when submitted to the microscope, was found to contain pus and mucous globules, but no ecchinococci. He has always eaten much vegetable food, and been particularly fond of cabbages; has never had jaundice. His father was asthmatical; one of his brothers died of phthisis, another brother died at the age of four, three days after the bursting of a tumour, immediately below the ear, which in the course of a month had gradually acquired the dimensions of a goose's egg, and on bursting gave exit to a fluid resembling water. A fortnight before death, "a film formed over the sight of both eyes," and four days before his death he became "stone blind."

S—— is five feet seven inches high, his weight nine stone four pounds and a half. He sleeps well, but still has nightly perspirations. Expectorates about an ounce and a half daily, more easily on stooping or lying down.

There can be little doubt that this case is one of hydatids of the liver, which have by absorption found their way into the lungs, and been expecto-

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rated. Every circumstance, particularly the improvement in his strength and the absence of echinococci in the expectoration, may encourage the expectation of his perfect recovery. In the cases of hydatids which have come under my observation, I have generally ascertained one or more of the following circumstances—hereditary liability, vegetable diet, or blows. This patient cannot recollect receiving any blow on the side. He has, however, taken much vegetable food, and the brother's history is remarkable in relation to hereditary tendency. Two inquiries present themselves in reference to the origin of these hydatid cases: First, what is the mode of introduction of the ova? Secondly, is there impaired vitality of some organ, rendering it apt to harbour these animalcules? The influence of moist food on sheep and rabbits, as increasing their liability to hydatids, is a matter of observation, and from analogy we should recommend in the human subject, when affected with these parasites, a nonrishing animal diet. The promotion of the hepatic secretion is also desirable; the introduction of bile into acephalocysts seeming to be destructive to these parasites, and favourable to their elimination. The treatment of S—— has consisted chiefly in a generous diet, the administration of tonics, with taraxacum, and the application to the hypochondriac region, of an ointment of iodide of potassium. His general strength is much improved, and the fulness in the hepatic region is subsiding.

The next patient whom I place before you has a very different aspect of chest. Even those of my audience who are at a distance can tell me at once that the lower half of the right side of the chest is flattened, and scarcely moves in inspiration. You see also that the apex of the heart beats close to the left nipple, instead of its proper situation, namely, two inches below, and an inch within that part. You form a surmise that the cause of these conditions is contraction from pleurisy, and further observation confirms the correctness of the suspicion conveyed through the eye. If the heart were displaced by existing effusion, you would probably see bulging rather than depression. You put your hand on the flattened portion of the chest as the man speaks, and the vibration of the voice is distinctly perceived; effusion therefore does not exist, for that would interrupt the communication of the vocal thrill. You make percussion, and find dulness greater than false membrane on the pleura alone would produce, but the dulness lessens as you proceed upwards to the apex. The cardiac dulness is displaced, but not extended; that from the liver extends too much on the left. Accompanying the first sound of the heart, a loud murmur is heard near the apex, but not in the epigastrium or to the right of the sternum above the cartilage of the fourth rib.

This patient, Thomas C——, a sign-painter, aged nineteen, was admitted on the 23rd of December; height, five feet, two inches, and threq urters; weight, seven stone, thirteen pounds; vital capacity by spirometer, 114. He has always lived well till lately, and has usually resided in London; has no hereditary tendency to phthisis; his father died of dropsy at the age of sixty-two, and his mother of jaundice at sixty. He enjoyed good health till three and a half years ago, whilst on a voyage when he received a severe blow on the right side of the chest, after which he expectorated about four ounces of blood. Six months afterwards he had rheumatic fever and inflammation of the lungs, and his sputa were streaked with blood. About eighteen months since he had a recurrence of hæmoptysis, he thinks to the amount of two quarts in a week, and since that time his breathing has been oppressed, and some degree of hæmoptysis has occurred whenever he has attempted to resume his occupation. He complains of a sensation of tightness of the chest on the right side; relieved by making pressure on the left; cough slight; expectoration frothy; respirations 32; pulse 88, not strong; digestive organs natural; enjoys exercise, but sleeps badly, and perspires at night.

In this case the cardiac murmur obviously indicates regurgitation from the left ventricle into the corresponding auricle. This regurgitation, however, is probably not considerable, for the circulation in the radial artery is not disturbed or irregular. There are various circumstances in this man's condition, encouraging us to hope that he will escape phthisis. The mitral disease is probably due to rheumatism, and such disease is rather inapt to occur in phthisical subjects. The dulness on percussion is least at the apex of the lungs, where tubercular disease is most common, and greatest at the part corresponding to the blow, which, by inducing inflammation and occasioning consolidation of the pulmonary structure, may have rendered the thrill of the voice more than usually observable. The frequent occurrence of hæmoptysis might excite suspicions of a tubercular tendency, but any such apprehension is qualified by the fact that this occurrence was preceded and probably induced by a blow. Some friction sound at the border of the contracted part of the chest announces that some inflammation of the pleura still exists. A blister has been in consequence applied, and the patient is improving under the use of iodide of potassium.

The next patient, George S——, you observe, moves the right side of the chest moderately during inspiration, especially at the upper part, but the left side scarcely at all; you suspect tubercular disease from this fact, and further examination confirms that opinion. Percussion yields a dull sound over the whole of the left side, and in the sub-clavicular region a sound is elicited which some of you will recognise as amphoric, like that produced by filliping the distended cheek, and doubtless arising from the proximity of a considerable cavity almost full of air. If a smart stroke be given whilst the patient's mouth is open, you hear the sound denominated by the French, *bruit de pot fêlé*, resembling, as the designation implies, the noise produced by striking a cracked

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pipkin. You may imitate the cracked-pipkin sound by doubling the hands together rather loosely, and striking the back of one of them against the knee in such a manner as to allow some escape of air. The production of this particular sound by percussion of the chest, is doubtless owing to the proximity of a considerable cavity, having yielding walls and free communication with one or more large bronchial tubes. If, whilst the patient's mouth is open, you strike smartly over such a cavity, air escapes freely and suddenly from it into the bronchus, and thus the peculiar sound in question is produced. S—— has no hereditary tendency to phthisis, but for fifteen years has been scarcely free from either syphilis or gonorrhœa. The free use of mercury, an unsettled life, and, we may suppose, an uneasy conscience, may have proved adequate for inducing the disease. He began to cough three years since, and a year afterwards to lose flesh; ten months ago he expectorated about four ounces of blood; his sputa green and viscid, average in quantity ten ounces in the twenty-four hours. Occasionally the cracked-metal sound is suspended, probably in consequence of plugging of the bronchial tube by the viscid secretion. Pulse 84; respirations 32. There is a chronic ulcer on the leg, which we shall not attempt to heal, for he always feels better when it discharges freely. He has fluctuated considerably, but on the whole improved in strength under the use of cod-liver oil. Belladonna pills and various measures have been adopted for the cough, but the only medicine which relieves him is the following linctus:—Hydrochlorate of morphia, one grain; diluted hydrochloric acid, fine minims; diluted hydrocyanic acid, half a fluid drachm; syrup of squills, one fluid ounce. Water, one fluid ounce. Mix. One drachm to be taken when the cough is troublesome.

The last patient I have to introduce to you today is Charles B——. As you watch the movement of his chest, let me remind you that the advance of either of the five upper or "thoracic ribs" in ordinary inspiration varies from ·02 to ·07 of an inch, and in an extraordinary effort may extend to about two inches; whilst the four or five inferior ribs, which obey the influence of the diaphragm, move outwards ordinarily from ·25 to ·3 of an inch, or in an extreme inspiration about an inch and a half. You will observe that the upper part of B——'s chest moves in correspondence with this rule; but that the lower part, instead of advancing according to this rule, absolutely recedes. By means of Dr. Sibson's chest-measurer (Medico-Chirurgical *Transactions*, vol. xxxi.) we may determine the exact amount of this deficiency of movement; or if you have not had sufficient practice for the dexterous management of this instrument, try that of Dr. Quain, in which the sliding joints are dispensed with. Even this instrument, however, excepting to those practised in its use, is not more trust-worthy than the eye. In practice, the attentive eye soon detects the difference of form and movement associated with the diseases to which I have referred; but it is doubtless a great advantage to be able to state to others, by the aid of a graduated instrument, the exact amount of difference. If you strike this patient's chest, the sound elicited is clear; and you have already recognised the characteristic movement of emphysema. The diaphragm in contracting affords space for the expansion of the lungs, but the pulmonary cells already filled cannot admit more air; atmospheric pressure, therefore, takes effect, and the ribs are forced inwards. This patient is a tailor. He has been subject to colds for ten years, owing, he thinks, to transitions from hot workshops lighted with gas into the cold air. During the last three years these colds have become almost incessant. He has suffered from shortness of breath and cough, and occasional paroxysms of dyspnœa. For the last ten months he has kept his room; sleeps in the sitting posture, with the body bent forwards; expectoration partly viscid, partly frothy; sonorous and sibilous rhonchi heard all over the chest; pulse 88; respirations 26. He has no hereditary tendency to phthisis or to gout, and has never had hæmoptysis. Asthma would seem in this case to be a consequence of chronic bronchitis and emphysema. It is a disorder depending probably on a peculiar susceptibility of that part of the nervous system which supplies the bronchial tubes and pulmonary cells, but a susceptibility which is rarely manifested in a decided manner until some additional influence is exerted, such as indigestion, gout, bronchitis, or cardiac disturbance. The emphysematous condition of the lungs, which frequently accompanies asthma, is well entitled to your careful study. It is connected with an atrophied condition of the pulmonary cells. If at any early period of the disease you make a microscopical examination of the affected lungs, you will observe a number of little bright dots, like oil-globules, on the membrane which sustains the vessels. At a later period you will find the membrane cribriform, and its meshes of vessels more widely separated than in the natural condition. Partly in consequence of the deficient supply of blood, and partly, it may be, from venosity of the circulating fluid, diminished liability to phthisis is characteristic of emphysema. When cicatrized cavities are found in any part of the lungs, it is common to discover emphysematous portions in the adjoining structure, probably because the obliteration of vessels which attends such cicatrization tends to diminish the supply of blood to the neighbouring cells. Even when you have reason to suspect the existence of phthisis in emphysematous subjects, you have ground to hope that the tubercular disease will be slow in its progress.

There is something very capricious in the asthmatic susceptibility. Some individuals have paroxysms only in town, some only in the country; others indifferently in town or country, but experience relief from the attack by immediate change either to one or the other. The late Duke of Sussex, who became asthmatical at a very early age, always escaped the paroxysms when at the

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foot of Vesuvius, but suffered repeatedly when residing in Naples. Measures which immediately relieve the fit in one individual are useless in another. Sometimes indeed in the same subject a remedy at one time efficacious will at another time utterly fail. Thus, in our patient B——, smoking stramonium at first afforded instantaneous relief, but subsequently failed. The inhalation of chloroform almost invariably relieves the asthmatical paroxysm, but its use is not to be indiscriminately recommended. In B—— the pulsation of the heart can be seen at the epigastrium, indicating, what is very common in such cases, some dilatation of the right side of the heart, as a consequence of the obstruction in the pulmonary circulation; and what you know of the influence of chloroform on the heart should make you cautious of its administration under such a complication.

It is therefore satisfactory to have other measures in reserve, and in many instances I have found remarkable relief experienced from the use of blotting-paper dipped in a saturated solution of nitrate of potash, dried, and then set fire to on a plate so placed as to expose the patient to the vapour. Whether the efficacy of this measure be owing to empyreumatic bituminous vapour or to nitrogenous fumes, I cannot tell. I can neither explain its remarkable efficiency, in some instances, nor its failure in others; but it is a remedy of real value; and I think I owe the suggestion to Mr. Harrison, of Broughton, near Manchester.

But it is not enough to relieve the paroxysms: you must aim to accomplish permanent amendment, and with this view must not be satisfied till you have rectified every disordered function, and improved to the greatest possible extent the nervous tone of your patient. Above all, endeavour to subdue any accompanying bronchitis. In many instances grain doses of mercurial pill with antimony, when watchfully regulated so as to avoid salivation, and gradually suspended, as the rhonchus moistens, are with this view singularly efficacious. When, however, there is the least threatening of consumption, it is desirable to find a substitute for the mercurial pill, and the combination most similar in effect is probably iodide of potassium mixed with antimony, which latter medicine would seem to have a tendency to direct the influence of the iodide of potassium to the bronchial tubes. B—— has therefore taken a mixture according to the following prescription: —iodide of potassium, three grains; potassio-tartrate of antimonial wine, ten minims; tincture of henbane, fifteen minims; decoction of sarsaparilla, one fluid ounce; make a draught, to be taken three times a day;—and the benefit has been obvious; the breathing having become easier, the paroxysms no longer recurring, and the sibilant rhonchus, which was formerly audible during both inspiration and expiration, being confined to the latter, thus showing that the more minute tubes, into which the air was noisily forced by inspiration, have recovered their natural condition.

Is it probable that alum might prove useful as a remedy in asthma? It is almost a specific in lead colic and in hooping-cough—diseases not without analogy to asthma, in the paroxysmal character of the attacks, and perhaps in the correspondence of the nervous fibres through which the morbid influence is conveyed.

When a medicine is proved to have remarkable efficacy in any one disease, we may often extend its use to the treatment of other affections, if we can succeed in discovering what particular condition the remedy modifies, and in classifying together such other disorders as present a distinct analogy in reference to this condition.

Foreign Department.

Sanguineous effusion behind the Uterus.

At a late meeting of the Surgical Society of Paris, M. Monod related the following case:—A woman was admitted into the Maison de Sante with severe pain in the pelvic region. This case was first looked upon as one of retroversion of the uterus, but it was soon discovered that a considerable fluctuating tumour existed just behind the womb. Two punctures were made at a little interval, which both yielded blood; the pain, however, did not diminish, and the patient died. On a post-mortem examination, a large sac was found behind the uterus, and close upon that organ; it was divided into two distinct halves, both filled with blood.

On the Compression of the Aorta in Uterine Hæmorrhage.

Our readers are aware that French obstetricians put great faith in the compression of the aorta in uterine hæmorrhage. M. Vial advises, however, not only to compress the aorta whilst the blood is being lost, but to continue the pressure for several hours, even when the hæmorrhage has ceased, with the view of preventing syncope; the latter being often mortal, and almost always following abundant uterine hæmorrhage. M. Vial thus endeavours to keep the blood in the upper part of the trunk, and to forestall its reaching the parts beneath, as well as the lower extremities. If this pressure *can be borne* for the time mentioned, it should certainly be tried in desperate cases.

M. Chailly, candidate for a seat in the Academy of Medicine of Paris, in the obstetric section, lately read a memoir on the above-mentioned hæmostatic measure. The author mentions eighteen cases of hæmorrhage after delivery: in these, pressure on the aorta arrested the blood seventeen times, for a period of a varying duration, which, however, allowed in each case other means, as ergot of rye, ice, &c., to be used, and to act beneficially. The pressure failed in an anæmic patient, though she lost but very little blood after the application of pressure.

Successful Cæsarian Operation.

M. Bonchacourt, chief surgeon of the Maternity of Lyons, has just published, in the *Bulletin de Thérapeutique*, the case of a deformed woman, thirty-two years of age, upon whom he performed the Cæsarian section with complete success. The patient's sacro-pubic diameter was only two inches and two lines; embryotomy had been performed in a former confinement, four years previously, and in October, 1850, she again presented herself on the point of parturition. In about seventeen hours from the beginning of labour the cord and one arm were expulsed by very powerful contractions, but the head could evidently not pass.

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M. Bonchacourt, finding that the heart of the fœtus and the cord pulsated strongly, resolved, after consulting with his colleagues, to perform the Cæsarian operation. Chloroform was used, the child extracted alive, and the operation, with the dressing, did not last more than twenty-five minutes. The child died five days afterwards from ordinary causes, and the mother left the hospital twenty-four days after the operation, the wound being completely cicatrized, and all the functions performed in the most satisfactory manner. The patient was seen in April, 1851, five months and a half after the Cæsarian section, and found quite well; the only remains of the operation being a slight and easily reducible hernia, a little distance below the umbilicus.

Traumatic Tetanus controlled by Quinine.

M. Coste, chief surgeon of the Hôtel Dieu of Marseilles, has published, in *L'Union Médicale*, the case of a boy sixteen years of age, who was attacked by tetanus in consequence of a contused wound of the toes. The disease was arrested by large doses of disulphate of quinine (maximum forty-five grains in one day,) after bleeding, baths, &c., had in vain been resorted to. The cure was accomplished in about a fortnight. If we mistake not, quinine has been used in this country for the same affection, but without beneficial results.

Collodion in Skin Diseases.

Collodion seems to act admirably in those cases where a kind of artificial epidermis is required. Dr. Spengler, in the *Neue Med. u. Chir. Zeitschrift*, No. 28, 1850, gives various cases where the collodion either led to the cure or greatly relieved the symptoms. The author mentions that this substance was first used in skin diseases by Mr. Wilson, in this country; and gives details of the success he (the author) met with in thus treating impetigo, lichen, herpes labialis, chronic eczema, and cracked nipples. Our readers are aware that collodion is largely used in the London Hospitals in erysipelas of the face.

Lepra in Morocco.

The cruel manner in which, in times of yore, the unfortunate beings attacked either by syphilis or lepra used to be hunted down and driven from the abodes of men, never fails to excite sympathy for the sufferers and indignation at the ungenerous persecutors; but it is not generally known that, with respect to lepra, the same tracking and banishment are now practised in Morocco. Dr. Dulac, a French surgeon, writes in *L' Union Médicale*, "The most dreaded disease in Morocco is lepra; the inhabitants of the country consider it as highly contagious, and very stringent measures are adopted against those affected with it. As soon as such a patient is noticed in any part of the land, he is forced by the authorities to wear some distinctive piece of garment. The sick go about begging, seated, without saddle, on an old horse, with a large straw-hat and stick, and are known by this costume. They must not draw water from the common wells, and are confined to certain springs assigned to them.

"The town of Tide, situated about six miles from the capital, is exclusively inhabited by people affected with leprosy; they number about two thousand, and, of course, intermarry with women similarly visited. It has been noticed that their offspring do not evince any symptoms of the disease until they have reached puberty. (It might be asked whether the affection then results from contagion or hereditary taint.) The Arabs even say that women are free from lepra during gestation, but that the disease returns after they are confined. The doctors of the country recognise two species of lepra: the white (supposed to come from the cow,) and the black, (coming from the sheep.) The first species they look upon as curable, the second as beyond human skill." Dr. Dulac tried to treat some patients, but they always ran away, preferring their wretched wandering life to the chances of a cure. Sarsaparilla and sulphureous baths are said to be sometimes successful. Dr. Dulac would have added to the interest of his communication, had he given a minute description of the appearance of the lepra he saw in Morocco, and compared it with the same disease as observed on the Continent of Europe.

On the Proportions of the Human Skeleton.

M. Carus, of Dresden, has been endeavouring to discover the standard measure upon which the human frame is constructed, and considers that he has found it in the vertebral column. He states that the spine in a new-born child is just one-third of what it becomes in the adult; and he therefore takes the third part of the vertebral column as the abovementioned standard. The head, for instance, its length and breadth taken together (without the lower jaw, which is a sort of extremity of head,) is just the size of the standard measure; on the trunk each clavicle, with the acromion, the sternum, and each scapula, may be measured upon the same suit. Such is likewise the case with the pelvis. The normal length of the arm is three measures, the hand one, the foot one, the tibia two, the femur two and a half, &c. The whole length of the body comprises in the normal state nine and a half of the standard measure. Mr. Carus has had a small figure constructed upon which these various proportions are accurately marked.

More Wonders in Medicine.

A very short time since, the French medical papers were very busy discussing a new method of curing sciatica, which consisted in cauterizing the lobe of the ear. Very respectable names, and numerous cases, supported this extraordinary procedure. We have now another startling manner of dispelling both neuralgia in the face and toothache; it consists in merely touching with a blunt probe the membrana tympani. The author of this method is M. Desterne, who has published in *L' Union Médicale*, the rise and progress of his discovery, accompanied with numerous cases, which are extremely surprising. The most intense toothache connected with decayed teeth, is relieved in a moment by the magic touch of the membrana tympani; agonizing neuralgia of the face, one of six months, the other of two years and a half standing, were cured in an instant by the same means; hemicrania vanishes, and quinine is left far in the background. These sudden effects are supposed to be obtained by the agency of the corda tympani nerve.

The Press and the Quacks.

It is generally considered in this country that the advertising quacks exercise a great influence over a portion of the periodical press, by their constant advertising; there can be no doubt but that the editors who admit these polluting announcements into their journals, become accomplices with the quacks in their bare-faced pretensions. But the French charlatans, as we learn by the "Presse Medicale de Bruxelles," distance the English completely respecting the hold they have taken upon the periodical press. This will become apparent when we state, that the Parisian quack who sells an antisyphilitic medicine, which is very appropriately called "*Rob*," is co-proprietor of such papers as *Le Siecle*, *Le Constitutionel*, *Le Corsaire*, and even *L' Abeille Médicale*.

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RECORDS OF THE RESULTS OF

MICROSCOPICAL AND CHEMICAL ANALYSES

OF THE

SOLIDS AND FLUIDS

CONSUMED BY ALL CLASSES OF THE PUBLIC.

COCOA,
AND ITS ADULTERATIONS.

Cocoa is prepared from the seeds of the THEOBROMA CACAO, which is cultivated chiefly in the West Indies, and parts of South America.

The seeds are enclosed in pods several inches in length, and are arranged round and attached to a central axis; each pod includes a considerable number of seeds, from twenty to thirty, and in some cases even more. They resemble somewhat, in shape, almonds, but are about twice as large.

There are several varieties of cocoa, named after the places from which they are procured: the three principal are, Trinidad, Maragnon, and Bahia cocoas. Of these the Trinidad is the best, and the Bahia the least valuable; the latter kind is distinguished by the smoothness of the seeds and their bright red colour.

Dr. Ure, in his "Dictionary of Arts, Manufactures, and Mines," gives the following particulars in reference to cocoa and chocolate:

"Chocolate is an alimentary preparation of very ancient use in Mexico, from which country it was introduced into Europe by the Spaniards in the year 1520, and by them long kept a secret from the rest of the world. Linnæus was so fond of it, that he gave the specific name, *theobroma*, food of the gods, to the cacao tree which produced it. The cacao beans lie in a fruit somewhat like a cucumber, about five inches long, and three inches and a half thick, which contains from twenty to thirty beans, arranged in five regular rows, with partitions between, and which are surrounded with a rose-coloured spongy substance, like that of water-melons. There are fruits, however, so large as to contain from forty to fifty beans. Those grown in the West India Islands, Berbice and Demerara, are much smaller, and have only from six to fifteen; their development being less perfect than in South America. After the maturation of the fruit, when their green colour has changed to a dark yellow, they are plucked, opened, their beans cleared of the marrowy substance, and spread out to dry in the air. Like almonds they are covered with a thin skin, or husk. In the West Indies they are immediately packed up for the market when they are dried; but in the Caraccas they are subjected to a species of slight fermentation, by putting them into tubs or chests, covering them with boards or stones, and turning them over every morning to equalize the operation. They emit a good deal of moisture, lose the natural bitterness and acrimony of their taste by this process, as well as some of their weight. Instead of wooden tubs, pits, or trenches dug in the ground, are sometimes had recourse to for curing the beans—an operation called *earthing* (*terrer.*) They are lastly exposed to the sun, and dried. The latter kind are reckoned the best, being larger, rougher, of a darker brown colour, and, when roasted, throw off their husks readily, and split into several irregular fragments; they have an agreeable mild bitterish taste, without acrimony. The Guiana and West India sort are smaller, flatter, smoother-skinned, lighter coloured, more sharp and bitter to the taste. They answer best for the extraction of the butter of cacao, but afford a less aromatic and agreeable chocolate. The fatty matter is of the consistence of tallow, white, of a mild agreeable taste, called butter of cacao, and not apt to turn rancid by keeping. It melts only at 122° Fahr., and should therefore make tolerable candles. It is soluble in boiling alcohol, but precipitates in the cold. It is obtained by exposing the beans to strong pressure in canvas bags, after they have been steamed or soaked in boiling water for some time. From five to six ounces of butter may be thus obtained from a pound of cacao. It has a reddish tinge when first expressed, but it becomes white by boiling with water.

"The beans, being freed from all spoiled and mouldy portions, are to be gently roasted over a fire in an iron cylinder, with holes in its ends, for allowing the vapours to escape, the apparatus being similar to a coffee-roaster. When the aroma begins to be well developed, the roasting is known to be finished; and the beans must be turned out, cooled, and freed, by fanning and sifting, from their husks."

COMPOSITION OF COCOA.

The following is the composition of 100 parts of the seeds of West India cocoa, deprived of husk, according to Lampedius:—

Fatty matter	53.10
Albuminous brown matter containing the aroma of the bean	16.70
Starch...	10.91
Gum	7.75
Lignine	0.90
Red pigment	2.01
Water	5.20
Loss	3.43
	100.00 parts.

The above analysis is very nearly accurate, but we believe that the proportion of starch is somewhat underrated.

It is evident, then, that the nutritive properties of cocoa are very great, and that from the quantity of fatty matter present, it is especially adapted to the maintenance of respiration, and the temperature of the body, as well as to the development of fat.

When genuine, cocoa is a very wholesome as well as nutritious article of diet, and one which ought to be more generally employed. According to some analysts, cocoa contains theine, the active principle of tea.

The shells, or husks, form about twelve per cent. of the weight of the beans; they contain but little fat, much lignine, and some mucilage.

STRUCTURE OF THE COCOA-SEED.

It is of very great importance that the minute structure of all vegetable substances employed in food and medicine should be thoroughly understood, for without such knowledge it is quite impossible to detect the adulterations to which the majority of these substances are liable.

The structure of the seed, or bean, as it is sometimes called, of the cocoa, is very characteristic, although somewhat complicated; in it, as in other seeds, two parts require to be distinguished, the shell or husk, and the seed proper.

The first structure noticed on the surface of the seed, consists of a considerable number of *tubular fibres* of large size, containing granular matter and minute corpuscles; they are more abundant on some seeds than others, and do not appear to form part of the seed itself, but to belong rather to the seed vessel, and are probably derived from the spongy substance which surrounds the seeds when in the pod; the fibres for the most part run parallel to each other in the course of the long axis of the seed.

The *husk* may be separated into three or four distinct tunics or membranes.

The *first or outer membrane* consists of elongated cells, adapted to each other, and disposed in a single

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layer, with their long diameters placed transversely to the axis of the seed.

The *second tunic* is constituted of large angular cells, superimposed in several closely connected layers; towards the centre of the membrane formed by them the cells increase greatly in size; their parietes become thin and diaphanous, and their cavities filled with a mucilaginous substance, which, in seeds soaked in water for some hours, is seen to be considerable in quantity.

As the cells forming the second membrane approach the surface of the seed, they lose their mucilaginous character, become smaller, and return to their original size.

If now the surface of an entire seed enclosed in its membrane be examined, several raised lines or fibres will be observed, commencing at the end of the seed attached to the seed-vessel, spreading themselves out over its surface, and terminating at the distal extremity of the seed; these fibres are composed of spiral vessels, which lie imbedded in woody tissue and the cells above described.

The second membrane forms the chief substance and thickness of the husk.

The *third* membrane, thin and delicate, consists of angular cells of small size, the cavities of which contain minute globules of fat; in removing the outer tunics this membrane sometimes comes away in part with them, but in general the greater portion adheres to the surface of the seed. This membrane covers not only the outer surface of the lobes of the seed, but also dips down between them, and furnishes each of the opposed sides with a covering; it is most evident, however, on the external surface. It is probable, notwithstanding it may be exhibited as a separate tunic, that it is yet, strictly speaking, not to be regarded as a distinct structure, but that it really belongs to the seed, since on removing it, cells belonging to the substance of the seed frequently come away with it; the colourless cells constituting it being evidently gradually transformed into the coloured ones of the seed itself. Although we have described this membrane as a single and continuous structure, it is really compound, each lobe being furnished with a distinct membrane of similar construction.

Situated in the interspaces of the lobes is a fourth structure, attached externally to the second membrane, the cells forming which pass down upon it for a short distance; although clear and transparent, it exhibits a fibrous structure, and on its surface a considerable number of small crystals are always to be seen, consisting probably of margarine, as well as many elongated bodies, rounded at either extremity, and divided into several compartments or cells, and which do not appear to be attached to the membrane on which they lie. From their curious appearance, and the absence of connexion with any of the other structures of the cocoa, the observer is led to suspect that they are extraneous growths, probably fungoid. We have detected them in every sample of cocoa-seed submitted to examination.

We have now completed the description of the several structures which enter into the composition of the husk of cocoa, which, although it contains scarcely any oil, and no starch, and is therefore but little nutritive, is yet present in almost every sample of flake, rock, and other less-carefully manufactured preparations of cocoa.

The French chocolate manufacturers rarely make use of the husk, but generally dispose of it, obtaining about threepence per pound.

The greater part of the rejected and comparatively worthless husks find their way to Ireland.

Of these husks, Dr. Ure states 612,123 lbs., out of 753,580 imported for consumption in 1840, were consumed in Ireland, and less than 4000 lbs. of cocoa-beans.

There is reason to believe that in some cases the fragments of husk prove irritating to the intestines, and occasion diarrhœa.

The *seed*, deprived of its husk, is seen to be composed of several lobes, angular in form, and irregular in size and shape; under pressure, these readily separate from each other, and the seed breaks up into pieces, which are known as "nibs."

The lobes are constituted of innumerable minute cells, of a rounded form, the cavities of which are filled with starch-corpuscles and fatty matter.

On the surface of the seed these cells become angular by compression, and are usually of a deep-red colour; the tint, however, varies greatly; they are frequently, in parts, spotted with purple, and even deep-blue.

Each cell contains many starch-corpuscles, small in size, of a rounded form, and which often present an obscure, radiate, or stellate hilum.

Placed at one extremity of the seed is the *embryo*; this consists of cellular tissue, the cells or meshes of which enclose numerous starch-granules and spherules of oil.

On the Adulteration of Cocoa.

In this country cocoa is sold under the names flake, rock, granulated, soluble, dietetic, homœopathic cocoa, &c.

Now there is nothing in these names to indicate that the articles in question are anything more than varieties of cocoa, or to show, what is too frequently the case, that they are compounds of sugar, starch, cocoa, and oftentimes other substances.

The practice of calling these *mixed* articles cocoa is manifestly as improper and deceptive as it is to call *the compound of coffee and chicory*, Patent Compressed Coffee, Finest Old Turkey Coffee, &c.

The French and other continental manufacturers of cocoa adopt a more straightforward and proper course: they never call their compound and manufactured articles cocoa, but chocolate; thus they even denominate the cakes which they prepare, and which contain nothing but cocoa, chocolate—"chocolat sans sucre," although, with strict propriety, they might in this case have used the word cocoa.

The cocoa, then, of the English makers in general is not cocoa at all, but chocolate; whenever, therefore, the word cocoa, an adjective of indefinite signification being prefixed, is employed to designate an article which is not pure or genuine cocoa, *we shall consider and describe that article as adulterated*—a course which is not only suggested by common sense, but also justified by the law, as framed to prevent the adulteration of cocoa.

The works of Accum, Brande, Ure, and Pereira, contain but little information respecting the adulteration of cocoa; the only English writers who have treated of it at all fully being Mitchell and Normandy.

The first of these authors (Mitchell) has the following observations on the subject:—

"Chocolate is adulterated with flour, potato-starch, and sugar, together with cocoa-nut oil, lard, or even tallow. Even the so-called finest chocolate is made up with clarified mutton-suet and common sugar, together with ordinary cocoa.

"If in breaking chocolate it is gravelly,—if it melt in the mouth without leaving a cool refreshing taste,—if it, on the addition of hot water, becomes thick and pasty; and, lastly, if it form a gelatinous mass on cooling, it is adulterated with starch and such-like substances.

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"Where earthy and other solid substances are deposited from chocolate mixed with water, either the beans have not been well cleansed, inferior sugar has been employed, or mineral substances have been added to it, either for the purpose of colouring or of increasing its weight.

"Moreover, when chocolate has a kind of cheesy taste, animal fat has been added; and when very rancid, either vegetable oil or even the seeds themselves have been employed in the sophistication.

"The mineral substances employed in the making up of chocolate are some of the ochres, both red and yellow, together with minium (red lead,) vermillion, sulphate of lime, chalk, &c. Chocolate so adulterated, more especially with the preparations of lead, is highly injurious; it is, however, only the inferior chocolates that are thus adulterated."

From the work of Normandy we extract the following remarks:—

"Unfortunately, however, many of the preparations of the cocoa-nut, sold under the names of chocolate, of cocoa flakes, and of chocolate powder, consist of a most disgusting mixture of bad or musty cocoa-nuts, with their shells, coarse sugar of the very lowest quality, ground with potato-starch, old sea-biscuits, coarse branny flour, animal fat (generally tallow, or even greaves.) I have known cocoa-powder made of potato-starch, moistened with a decoction of cocoa-nut shells, and sweetened with treacle; chocolate made of the same materials, with the additions of tallow and of ochre. I have also met with chocolate in which brick-dust or red-ochre had been introduced to the extent of twelve per cent.; another sample contained twenty-two per cent. of peroxide of iron, the rest being starch, cocoa-nuts with their shells, and tallow. Messrs. Jules Garnier and Harel assert that cinnabar and red-lead have been found in certain samples of chocolate, and that serious accidents had been caused by that diabolical adulteration. Genuine chocolate is of a dark brown colour; that which has been adulterated is generally redder, though this brighter hue is sometimes given to excellent chocolate, especially in Spain, by means of a little annato. This addition is unobjectionable, provided the annato is pure, which, however, is not always the case."

In the above quotations mention is made of the chief adulterations to which cocoa is subject; we will therefore proceed to consider the methods by which they may be detected.

On the Detection of Foreign Fatty Matter.

Animal oils and fats, on exposure to the air for a time, become rancid and disagreeable to the taste; for their detection, therefore, it is recommended that the suspected cocoa should be spread out, and subjected to the action of the atmosphere.

"The adulteration by lard, tallow, oils, and suet," writes Mitchell, "are best detected by the taste, after the chocolate has been exposed for some time to the action of the air in a tolerably warm place. In order to effect the desired change rapidly, the chocolate should be scraped very fine, and spread out upon a plate or piece of paper. In a few days the foreign fatty matters will become rancid, and can then be detected by the peculiarly disagreeable taste and smell which fatty substances in that condition possess."

"The presence of *animal fats*," states Normandy, "may be detected by the palate, for the chocolate generally has, in that case, a cheesy flavour; or, when common butter or oil has been added, it has a rancid flavour. This is quite characteristic, for butter of cocoa always remains perfectly sweet.

"The presence of *animal fats*, or of *oils*, may also be recognised by saponifying a portion of the chocolate as follows:—Rasp about 2000 grains of the chocolate under examination, and boil them with water and some caustic potash. When the fat has saponified, dilute the mass with a sufficient quantity of water, and filter three or four times. The milky filtrate, which is, in fact, a solution of soap, should now be supersaturated with nitric acid; this will separate the fat, which will float on the liquor after cooling. It may then be collected on a filter, and on rubbing a small portion of it between the fingers, the odour will generally indicate its origin; but more effectually still by heating it in a small capsule. Pure butter of cocoa has no odour. Or the chocolate may be exhausted by sulphuric ether, and by evaporating it, the fat will be left behind, and may then be identified, as just said."

The methods of detection pointed out in the above paragraphs are not without practical value; we believe, however, that we shall be able to suggest a different plan, by which the presence of foreign fatty matter may be determined with considerable ease and certainty.

This consists in ascertaining, by boiling, the quantity of fat present in any sample of cocoa of given weight, and by observing the size and form of the concrete fat-globules which form on the surface of the decoction when cold.

One half-ounce of genuine Trinidad cocoa, prepared from the kernels only, and boiled for ten minutes with ten ounces of water, yields about sixty-five grains of concrete fat, exclusive of loss.

The same quantity of genuine flaked cocoa, which contains both kernels and husk, boiled for the same period, yields about forty grains.

When, therefore, a sample of cocoa, treated as above, is found to contain a greater proportion of fat, there is no question, if the excess be at all considerable, and amount to several grains, that foreign fatty matter has been mixed with the cocoa.

But in some cases there may be no excess of fat, and even a deficiency, and yet animal oil or fat may have been added to the cocoa—circumstances sufficiently explained by the fact, that in many adulterated samples, sugar, starch, and a small proportion of animal fat, are frequently made to supply, to a great extent, the place of cocoa.

In all cases in which the presence of animal oil or fat is suspected, it is then of importance to notice the number, size, and form of the fat globules and discs which collect on the surface of a cup of cocoa when cold; if these be numerous, firm, shot-like, and globular, except on the upper surface, which is slightly flattened, and very small, rarely exceeding the twelfth of an inch, then there is no doubt but that the globules in question consist of the fat or butter proper to cocoa.

If, however, on the other hand, the globules be large, flat, or disc-like, exceed this size considerably, attaining, some of them, to one-fourth of an inch, and even more in diameter, then animal fat or oil is present, a conclusion which may be still further confirmed by testing the fat, keeping it for a time, and observing whether it becomes rancid or not.

Cocoa as ordinarily met with is mixed with variable, and often very considerable, quantities of sugar and starch. In order to ascertain whether the presence of these substances modifies in any way the quantity of oil which collects on the surface, or the size and form of the globules, we instituted the following trials or experiments.

One ounce of a mixture consisting of equal parts of genuine cocoa and white sugar were boiled for ten minutes in ten ounces of water: the globules which formed on the surface of the fluid when cold, did not

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differ materially in size and shape from those which occurr d on the decoction of pure cocoa, but the quantity of oil was a few grains less.

The same quantity of a mixture consisting of three parts of cocoa and one of potato-flour was treated in a similar manner; in this case the quantity of fat which rose to the surface was much less than in the former case, and the globules of oil smaller.

It is thus evident that the presence of neither sugar nor starch modifies very considerably the size and form of the fatty globules of cocoa, although less fat, with the latter especially, collects on the surface.

On the Detection of Starch.

For the detection of starch we are recommended to make use of iodine. Now those who give this recommendation surely cannot be aware of the fact that the cocoa-seeds contain certainly not less than 11 per cent. of starch, and, therefore, that this re-agent, if properly applied, invariably shows the presence of starch in every sample of cocoa, even the most genuine. But little reliance, therefore, ought to be placed on iodine for the detection of this adulteration, and those not aware that starch exists in cocoa might be led by its use into serious error.

It is not a little remarkable that those who advise the use of iodine make no reference, although their works were published within the last year or so, to the microscope as a means of detecting starch in cocoa, and yet this instrument is capable, not only of affording a good idea of the amount of starch present, but enables the observer to discriminate the several kinds of starch from each other, and to say whether wheat, potato, sago, or arrow-root starch, has been employed in the adulteration.

In determining the quantity of starch present in any sample of cocoa, it is well not to rely solely upon the microscope, but to observe the consistency of the decoction when cold; if the amount of starch be very considerable, forty or fifty per cent., the liquid will be thick and jelly-like.

In making observations on the comparative density of cold decoctions of cocoa containing different per centages of starch, we noticed that after a time the starch ceased to be uniformly diffused throughout the fluid, and that it, as well as the heavier particles of cocoa, subsided, leaving a supernatant stratum of clear liquid; this stratum varying in thickness according to the quantity of starch present, and being most shallow where there was most fecula, and deepest where this was least.

It then occurred to us that in the fact of the subsidence of the starch we had the means of determining with considerable precision the per centage of that substance present in any sample of cocoa.

We accordingly filled five tubular glasses, each seven inches and a half in height, three-fourths of an inch in diameter, and holding twelve drachms of water, with five different cold decoctions of cocoa, containing respectively 50, 40, 30, 20, and 10 per cent. each of starch; in the first, the thickness of the clear stratum was one inch, in the second, one inch and a half, in the third, two inches, in the fourth, two inches and a half, and in the fifth, three inches. It is to be understood, however, that these measurements are approximately correct only, and that to obtain perfectly accurate results it is necessary that the experiments should be carefully repeated. The proportion of the ingredients forming each decoction was 220 grains by weight of the mixture of cocoa and potato flour, to eight ounces of water, the boiling being continued for five minutes in each case.

Should the cocoa contain sugar as well as starch, this must be first removed, or its amount being ascertained, a corresponding allowance in the thickness of the stratum of clear fluid made.

The specific gravity of the decoction also enables us to form an approximate opinion as to the amount of starch present; this of course being greatest where there is most fecula.

Mr. Mitchell gives the following directions for the detection of starch in cocoa, from which it is clear that he was not aware that the seeds naturally contain a considerable quantity of starch:—

"Act upon about half an ounce of the suspected chocolate with a teacupful or more of hot water. Mix all well together in a mortar, and set aside to cool; when cold, add a few drops of a solution of iodine in water, (prepared as described under the article Flour.) If starch or flour be present, or ground beans or peas, or any substance containing starch, a blue coloration will occur. This coloration will be intense in proportion to the quantity of starch present. If only a very small quantity of starch be present, it will be advisable to strain the mixture of chocolate and water through a linen cloth, and act on the strained liquid with the solution of iodine. An alcoholic solution of iodine is also suited to this purpose. If the chocolate acted on be pure, only a yellowish-brown colouration will take place."

The directions of Normandy are more brief, but to the same purpose:—

"Genuine chocolate should dissolve in the mouth without grittiness; it should leave a peculiar sensation of freshness, and after boiling it with water the emulsion should not form a jelly when cold; if it does, starch or flour is present. The admixture of flour or of starch, moreover, may be readily detected by the blue colour which is imparted to the decoction, after cooling, by solution of iodine."

On the Detection of Sugar.

The presence of sugar in cocoa may be readily detected by the taste. To determine the quantity, the following simple but efficient proceeding may be adopted:—Dissolve a weighed quantity of cocoa containing sugar in cold water, filter, dry the residue by means of blotting paper and heat, weigh; the loss will indicate very nearly the amount of sugar with which the sample of cocoa operated upon was admixed.

To show to what extent this method may be relied upon, we may mention that we dissolved one ounce of a mixture in equal proportions of cocoa and sugar in water, and afterwards dried the residue, the weight of which was short of four drachms only twenty-eight grains.

On the Detection of Mineral Substances.

Of the mineral substances employed in the adulteration of cocoa, some are used for the sake of their weight; of these the chief are carbonate of lime or chalk, and sulphate of lime or plaster of Paris, and especially the former.

Other substances are employed for the colour they impart, and these are frequently had recourse to; the principal are red earth, red ochre, or Venetian red.

For the detection of these earths an ounce of each of the samples of cocoas to be analyzed should be incinerated, and the ash weighed and tested.

If chalk or carbonate of lime be present, an effervescence will ensue on the application of a mineral acid.

If the presence of any of the red earths be suspected, as these all contain iron, the ash should be tested for this metal, for which purpose it should first be treated with hydrochloric acid; this should afterwards be diluted, and the proper re-agents applied.

Mitchell gives the following directions for the detection of earthy matters:—

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"A considerable quantity of the suspected chocolate must be treated with successive portions of hot water as long as anything seems to be dissolved. The best method of operating is as follows:—

"The finely-scraped chocolate (say a quarter of a pound) is placed in a large vessel, and two or three quarts of warm water poured upon it, and the whole well stirred. After about a quarter of an hour, the supernatant liquid may be poured off, and the residual matter again treated with hot water, until nearly tasteless. It is now to be collected, dried, and tested."

Under this head Normandy has the following observations:—

"*Brick-dust*, and other *earthy matters*, are detected by incinerating a given weight of the chocolate or cocoa under examination; the impurities remain among the ashes, and may be easily recognised. This adulteration is also readily detected by grating 500 grains of the chocolate into as fine a powder as possible, throwing it into about half a pint of cold water, stirring the whole briskly for about ten minutes, leaving it at rest for about two minutes, and decanting the supernatant liquor. The earthy matter will then have subsided, and will be left as sediment."

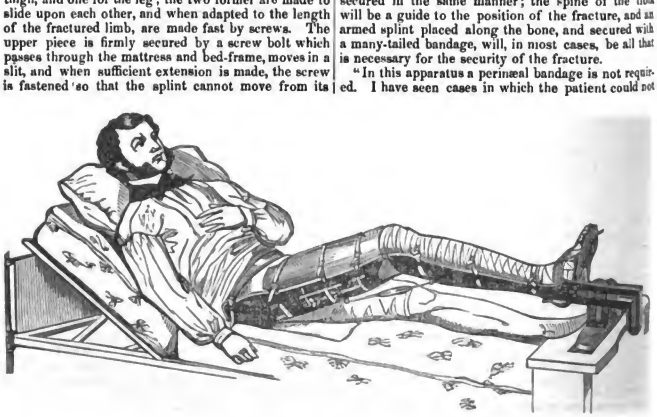
New Inventions
IN AID OF THE
PRACTICE OF MEDICINE AND SURGERY.

Fracture Apparatus. By Dr. Rae, Inspector of the Royal Naval Hospital Storehouse, Plymouth.

Dr. Rae has forwarded to us the following description of his Fracture Apparatus:—

"Having availed myself of the pencil of my talented friend and assistant, Mr. Macdonald, I now send you a delineation and description of the Fracture Apparatus, which I had in use at Chatham Hospital, and which I have improved during the two years I have been inspector in this hospital. But, indeed, the bed-frame and apparatus are so faithfully delineated, that its utility may be seen at one glance, and therefore my description shall be as brief as possible. The splint itself is made of sheet iron, and consists of two pieces for the thigh, and one for the leg; the two former are made to slide upon each other, and when adapted to the length of the fractured limb, are made fast by screws. The upper piece is firmly secured by a screw bolt which passes through the mattress and bed-frame, moves in a slit, and when sufficient extension is made, the screw is fastened so that the splint cannot move from its position. The leg piece is fastened, as will be observed, to a small block of wood, which moves in a groove in the middle of the frame at the foot of the bed, which frame will fit any cradle in the hospital; the splint also can be elevated, depressed, or extended; the screw between the the leg and thigh regulates the angle, and the moveable foot-board the necessary length for the leg. This sketch shows the position of fractures of the right leg or thigh; but by shifting the upper thigh-piece, and pushing over the moveable block at the foot of the bed, the apparatus becomes equally suitable for fractures of the left extremity. In the middle of the mattress there is an opening filled by a moveable cushion, connected with a similar opening in the bed-frame below, in which is placed a bed-pan apparatus for the convenience of the patient, so that the least movement of the body is never required for the purpose of defæcation. The pelvis is secured to the head of the splint and to the bed-frame, if necessary, by a band passing round the body. The apparatus is kept ready for use by having it constantly in use, with padded linen or calico passing along the whole of its length, and also to the foot-board. A many-tailed bandage may also be placed, either for the leg or thigh, and the straps with buckles passed as represented. When a patient is brought in with fractured thigh, the distance is measured from the upper and inner part, on the sound limb, to the inner condyles of the knee, and from thence to the sole of the foot; by this method we are enabled to adapt the apparatus to the proper length; the screws are then made fast, and the patient placed upon it. Much extension, or manipulation, is seldom required when the injury is recent. The foot is made fast by a padded leather belt brought round above the heel, crossed over the anterior part of the foot, round the foot-board, and back again, where it is secured by a buckle. From this belt proceeds two smaller ones below, each side of the ankle, and are also made fast behind the foot-board. By this means, and the weight of the body, sufficient extension is kept up. The many-tailed bandage may be passed round the thigh, if deemed necessary, but three armed splints, one on each side and one above, secured with the straps and buckles, will be found quite sufficient to secure the limb. If fracture of the leg, the foot must be secured in the same manner; the spine of the tibia will be a guide to the position of the fracture, and an armed splint placed along the bone, and secured with a many-tailed bandage, will, in most cases, be all that is necessary for the security of the fracture.

"In this apparatus a perinæal bandage is not required. I have seen cases in which the patient could not

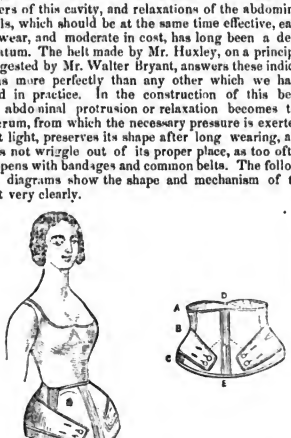


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bear one, and I have also seen erysipelas caused by the irritation which it produced; though in this hospital Dr. Allen has treated some fractures with the long splint and bandage very sucessfully. The fracture can be examined at any time without disturbing the limb, and infiltration is prevented—a matter of importance. The patient feels himself in a comfortable position, and has never to change it or to move his limb for the purpose of defæcation. In conclusion, I may add, that the splint lately supplied to us, the invention of Mr. Brown, of the London Hospital, promises to be of much value, especially for ship board; but for hospital purposes I prefer the apparatus I have now attempted to describe."

Abdominal Belt. HUXLEY, Vere-street, Cavendish-square.

AN efficacious belt for the abdomen in certain disorders of this cavity, and relaxations of the abdominal walls, which should be at the same time effective, easy to wear, and moderate in cost, has long been a desideratum. The belt made by Mr. Huxley, on a principle suggested by Mr. Walter Bryant, answers these indications more perfectly than any other which we have used in practice. In the construction of this belt, the abdominal protrusion or relaxation becomes the fulcrum, from which the necessary pressure is exerted. It it light, preserves its shape after long wearing, and does not wriggle out of its proper place, as too often happens with bandages and common belts. The following diagrams show the shape and mechanism of the belt very clearly.



Mr. Bryant's belt is highly useful in affording support in the latter part of pregnancy, for compression after delivery, and in cases threatening hæmorrhage, for which compresses are adjusted; it also affords valuable abdominal support in uterine prolapse, irreducible hernia, excessive corpulency, deficiency of tone in the abdominal walls, and in every case in which support is required for the lower part of the abdomen. Its construction is so simple, and free from all buckles or laces, that the figures of ladies wearing them can be fitted with the most perfect accuracy, by the person engaged in making them.

TEETOTALISM AND OPIUM-TAKING.

To the Editor of THE LANCET.

SIR,—Will you allow an old subscriber to say a few words on the practice of opium-taking—a practice which, I fear, is much on the increase in the rural districts of this country. The subject is highly important to the public, and not uninteresting to the profession at large. At the same time, there is little or no information respecting it to be met with in medical works. The question I wish to put is this: Is it possible to reform a person who has been long addicted to the practice of taking opium?

We all know the injurious effects its long-continued use produces both on body and mind; but it is only the unfortunate victims themselves who can depict the miserable depression, the indescribable uneasiness, they experience, when deprived of the accustomed dose.

Since the crusade of the teetotalers against spirit-drinking there is great reason to believe that the practice of taking opium is on the increase; and when one of the first of our physicians describes it as a virtuous and comparatively harmless species of excitement, compared with gin-drinking, I cannot but think he treats it with undue lenity, and may unintentionally contribute to the extension of the vice.

For those unfortunate creatures who daily resort to this baneful drug as a cheap species of intoxication, I have but little sympathy or commiseration. Their weakness entails a severe punishment even in this world. But there are others, especially among the middle classes of society, who resort to the use of opium, under the pressure of severe mental distress; and although nor poppy nor mandragora can

> "Pluck from the memory a rooted sorrow,
> Or rase the written troubles of the brain,"

still there are many cases in which morphia, or some other sweet oblivious antidote, by procuring sleep, preserves the sufferer from painful or heart-rending recollections. When relief is obtained by such means the practice soon becomes habitual. What was at first a moral solace is now converted into a physical necessity; while Time, the great mediciner, which sooner or later softens the pangs of every mourner, only serves to strengthen the chains of that habit, into which his sufferings have betrayed him.

It is for an unfortunate being of this description that I now bespeak your sympathy, and respectfully request the advice of my more experienced brethren. Some two years ago, after a severe domestic trial, my friend was induced to resort to morphia as a means of procuring sleep; but though the violence of his grief has long since subsided into a tender melancholy, he finds himself unable to throw off the habit he has so unwittingly contracted. Deprived of the accustomed dose, which I should premise is not a very large one, he describes himself as "irritable, dejected, prostrate in body and mind, and utterly incapable of discharging the ordinary duties and business of life."

What can be done in such a case? Should I advise him to leave it off totally and at once, and trust to time and nature for relief? Or do you recommend a gradual diminution of the dose? Is there no other stimulant less injurious in its effects, yet still capable of preventing that collapse of the system which assails every victim who wishes to reform? In short, what is the best course to follow for an opium-taker who wishes to desist from the practice, and who is otherwise in good health? Are we to consider entire abstinence impossible, when the practice has been indulged in upwards of two years? Coleridge used to assert that he could leave off when he chose, and I have heard many others say the same; but I never knew but one who permanently succeeded in his efforts at reform.

If the experience of any of your learned correspondents should enable them to throw a little light on this subject, I should feel greatly obliged by the communication, and it would prove, I think, generally acceptable to your readers.

That opium-taking is on the increase, any one may convince himself by making inquiries of the druggists. In the county in which I reside it is well known

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their chief profit consists in the retail sale of opium.

In conclusion, permit me to observe, notwithstanding the dreadful effects on the system at large which opium-taking commonly produces, that I know many old people who have taken it for years, with little apparent injury to their health. Continued observation has also forced on me another idea, which I promulgate with less confidence—namely, that the habitual use of opiates is in some way or other a powerful prophylactic against phthisis and diseases of an inflammatory nature.

I am, Sir, your obedient servant,
MEDICUS.

RASPBERRY JAM AND ACARI.

To the Editor of THE LANCET.

SIR,—Your exposure of the adulterations practised on the public by the dealers in articles of food has been so much and deservedly eulogized, that it needs no comment on my part.

As an example of the adverse circumstances under which vitality is retained in ova, I am induced to trouble you with the following circumstance:—

On examining some raspberry-jam, it was found covered all over with a whitish crust, which, when viewed by a pocket lens, was seen to be composed of myriads of acari, differing in no respect from the sugar acarus. I preserved some in Canada balsam, and placed them under the microscope; and on comparing them with some acari taken from brown sugar, I found no difference existing between them. I since am led to infer that the ova were in the sugar, which of course was boiled, not however destroying the vitality of these ova.

I may add that I examined some of the same sugar as that from which the jam was made, and found a few acari, but could not detect any ova.—I remain yours very truly,

M. T. M.

Medical Facts, News, Items, &c.

MORTALITY OF THE METROPOLIS FOR THE WEEK ENDING SATURDAY, JUNE 28.—In the week ending last Saturday the deaths registered in the metropolitan districts amounted to 1032. In the ten corresponding weeks of the years 1841-50 the average number was 924; if for the sake of better comparison, this average be raised in the ratio of increase of population (which during the last fifty years was 1·778 per cent. annually), it will become 1016, an amount which differs not materially from the number now returned. It will be observed that there is an increase of more than 60 on the week immediately preceding, when the deaths were 968. But this excess is not the effect of increased mortality; it is due to cases where coroners have held inquests, in many of which, though they occurred at earlier dates, the registration had not been completed till the end of the quarter. Sudden deaths, under which designation in the table are classed cases in which persons have been found dead, or have died suddenly, and the fatal disease has not been ascertained—these, which in the previous return were only 8, have risen last week to 29. But the great majority of inquests is on deaths from violence, privation, intemperance, &c., and in this class the number has been in each of the last two returns above the average, in the former week amounting to 52, in the latter 85. In the present list the deaths of 2 persons are ascribed to privation, of 2 to intemperance, 2 to want of breast milk or inanition, 3 to poison, 7 to burns and scalds, 4 to hanging or suffocation, 18 to drowning, 41 to fractures and contusions, (chiefly from carriages and falls,) and 6 to wounds and other injury. The present return shows that the mortality from diseases of the organs of respiration continues to exceed the usual amount at this period; the deaths in this class were 124, while the corrected average is 98. Phthisis was fatal to 145 persons, which differs little from the estimated number. The fatal cases included in the zymotic or epidemic class have risen from 205 in the preceding week to 218 in the last. Small-pox carried off 21 children, and 3 persons above fifteen years; measles was fatal to 41 children, scarlatina to 14, hooping-cough to 46, croup to 5, thrush to 4, dinrrhœa to 16 children and 3 adults, typhus to 38 persons. But this class is not in the aggregate above the average, though measles and hooping-cough are apparently rather prevalent.

At the Royal Observatory, Greenwich, the mean daily reading of the barometer was above 30 in. on every day after Sunday; and the mean of the week was 30·032 in. The mean daily temperature was below the averages of corresponding days as derived from the observations of ten years, on Sunday, Monday, and Tuesday; and on the four remaining days was successively 2°·7, 6°·6, 9°·7, and 6° above the respective averages. The mean temperature of the week was 62°·3. The wind was for the most part in the north-west on the first three days; it then changed to south-west, but was frequently calm during the rest of the week.

ROYAL COLLEGE OF CHEMISTRY.—The annual meeting of this institution took place on the 2nd instant, at the college, Oxford-street, Mr. J. A. Gordon in the chair. The report stated that, although the subscriptions had increased, the number of pupils had diminished, which had caused a slight decrease in the funds. During the past year the question of the supply of water to London had occupied the attention of the government, and Dr. Hofmann, with the sanction of the council, had undertaken the most extensive analysis of the different waters around the metropolis, in order to ascertain from whence the purest and best supply could be obtained. The financial statement showed the receipts to have amounted to £1689 17*s.* 2*d.*, and the expenditure to £1520 14*s.* 4*d.*, leaving a balance of £169 2*s.* 10*d.* The report was unanimously adopted, and a vote of thanks passed to his Royal Highness Prince Albert for his continued patronage of the college.

MESMERISM.—It may be in the recollection of our readers that Sir Philip Crampton, some time since, in order to test the powers alleged to be possessed by persons in what is called the clairvoyant state, produced by the mysterious influence of mesmerism, offered to enclose a bank note for £100, in a sealed envelope, which should become the property of any individual who could, while blindfolded and in the mesmeric sleep, tell its date and number. This challenge has been accepted by Mr. Hill H. Hardy.

ACCIDENT TO THE DOWAGER QUEEN OF SPAIN.—We learn from the *Boletin de Medicino*, &c., published in Madrid, that the Dowager Queen, in walking towards her carriage in Aranjuez, slipped on the grass, fell, and broke her right fibula. The leg was soon afterwards set by Don Pedro Maria Rubio and M. Drumen. The case is likely to do well.

FEEDING ON SPURRED RYE.—Several inhabitants of a village of France, in the department of Oillier, have just experienced the most dreadful symptoms by feeding on spurred rye. It was found necessary to amputate the leg of a child, and the mother and remaining children are in a very precarious state.

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Robert Lee

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Lectures
ON
SOME OF THE MORE IMPORTANT POINTS IN SURGERY.

(Delivered before the Medical Society of London.)

BY G. J. GUTHRIE, ESQ., F.R.S.,

Late President of the Royal College of Surgeons of England; consulting Surgeon to the Westminster Hospital, etc.

[*Continued from August No., page 96.*]

Causes and Treatment of Spasmodic and Permanent Stricture of the Urethra; Stricture caused by a simple Fold of Mucous Membrane; Effects of constant Straining upon the Bladder; Operation of Dividing the Stricture from the Perinæum; Division of the Bulb; Danger of Hæmorrhage; Chloroform in Operation for Retention of Urine. Cases.

Mr. HUNTER entertained the idea that the urethra was muscular, as well as elastic. Sir E. Home and Mr. Bauer demonstrated a fibrous structure; but their histological knowledge was not sufficiently advanced to enable them to say whether it was muscular or not. It is now shown to be of the involuntary muscular kind. Within the muscular structure there is another, endowed with what I formerly termed *vital* elasticity, in distinction to that which is observable in caoutchouc, or in an ordinary spring. It is composed of the yellow elastic tissue now known to exist also in the second layer of the internal coats of an artery, and there termed fenestrated, from the fibres crossing frequently at right angles, leaving between them small window-like spaces, of a more or less cube-like shape.

The muscular structure now demonstrated brings more home to our comprehension the manner in which a contraction of any part of the urethra can commence, even if it should be of a single bundle of fibres, not thicker than a sheet of paper. When this contraction is *transitory*, the complaint is called SPASMODIC; when the contraction has become established, the stricture is then said to be PERMANENT.

It is consolatory to gentlemen to be told that their obstruction is only spasmodic, inasmuch as it conveys the idea of the complaint being quite removeable; the general impression being, that a permanent stricture may be relieved, but not cured—an opinion which is often correct, although frequently erroneous when an appropriate treatment is adopted. That the muscular structures which exist around the urethra are exposed to the occurrence of spasm, like all other similar structures of the body, cannot be doubted; nevertheless, it may be accurately said, that a spasmodic action of these parts, occurring spontaneously in a perfectly healthy man, is one of the rarest derangements which occur in the human body. It is usually the consequence of irritation and inflammation of the mucous membrane of the urethra, which remain after the spasmodic action of the muscular parts has subsided, giving rise to the uneasy feeling experienced by the patient in the perinæum and adjacent parts, and to the sympathetic irritability of the bladder. Inflammation is, then, the first step in the formation of a spasmodic stricture, which is, therefore, always an inflammatory one, differing only from a permanent one in its being less dependant on a positive alteration of structure, but which alteration of structure is sure to ensue, if the state miscalled spasmodic is permitted long to continue.

The cases usually considered spasmodic are those of young men, who when suffering from gleet or gonorrhœa, which have been imperfectly or only partially cured, are tempted to commit some excess. They feel a desire to make water, which they repress, or perhaps indulge with some difficulty, but which increases and is soon found to be irrelievable without assistance. The greater the effort, the more determined the straining, the greater the agony. The practice constantly stated to me by students, as most advisable in such cases, and which I as constantly censure, I hope for their advantage and that of mankind, is, to relieve the spasm by sending the patient to bed, by putting him in a hot bath, by fomenting the parts with hot anodyne fluids, by general bleeding, by the application of leeches, and by a dose

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of compound ipecacuanha powder,—under the influence of which, in the course of a few hours of misery, it is possible the urine may begin to flow. I was taught a better practice, very many years ago, by a Scotch friend of mine, a young man, although an old soldier, who, after a debauch of this kind, which lasted half the night, found he could make no water when he awoke in the morning. He sent for me, begging I would bring a catheter. When I arrived, I proposed a warm bath, an opiate draught, &c. His answer was peremptory—"Damn your draughts, doctor: pass the catheter; I have had the stoppage before." I passed the instrument with some little difficulty, and drew off his water; upon which he jumped into bed, saying, "God bless you, doctor! but damn your physic." In the afternoon he was nearly free from inconvenience. Since that time, I have always made it a rule to pass a small gum elastic catheter into the bladder, and draw off the urine, which gives instantaneous relief. An enema, composed of two or three grains of opium, dissolved in two ounces of warm water, should then be administered, which will usually remain, and by its sedative qualities, give effectual relief. It should be repeated every two or three hours, if the patient should not sleep, until the urine begins to flow, with half a grain of the muriate, or acetate, or other preparation of opium, in a pill or draught; and if the pain and desire to make water should return, the catheter should be again resorted to. It is only in very plethoric or inflammatory habits that bleeding of any kind is necessary to relieve the retention of urine, although the loss of blood locally, at a later period, often aids materially in promoting the removal of the cause of the complaint. A hot bath is a comforting, but not an essential, part of the treatment, more particularly as it cannot always be procured. When a person, under these circumstances, is restored to his usual state, and an examination is made of the urethra, a few days afterwards, by an instrument of a moderate or small size—and a large one should not be used—it will be found to pass readily, to the extent of from five to six inches, in the greater number of cases, when it begins to cause a sensation of pain, which was not experienced in the preceding part of its course. The surgeon is sensible of a resistance which is greater than might be expected, whether he uses a solid or a wax bougie, but which, after a little gentle pressure, yields, and the instrument passes into the bladder, without further inconvenience than its giving rise to a desire to make water. This is called overcoming a spasm; but it is a spasm which is always present, and not temporary. It cannot, therefore, be a spasm, the essential character of which rests on its being only of casual and temporary existence. It is a case of low or passive inflammation of the mucous membrane, which, if treated with gentleness, will always yield; but which, if treated roughly, ends in becoming a permanent complaint, giving rise to symptoms and inconveniencies which may remain through life.

A *permanent* stricture depends upon some positive alteration of structure of the wall of the canal, the consequence of inflammation, which causes it to thicken, and at the same time deprives it of its capability of being dilated with the same facility, and to the same extent, as in a state of health. A stricture of this kind which has offered, during life, considerable resistance to the passage of an instrument, may be found, after death, to have been formed by a mere line of irregular thickening, extending only for a third of an inch, in an oblique direction, along the canal. In most instances, it is more or less circular, generally affecting the under rather than the upper part. The most marked case of this kind I ever saw was at so short a distance from the orifice of the urethra, that it could be distinctly seen passing across the canal, like a thin fold of membrane. The opening for the passage of the urine was on the right side, and would only admit a small probe for the lachrymal duct to be passed into it. I cut through this septum, which resembled an opaque membrane drawn across the canal, and removed the disease, which appeared to be formed from the inner mucous membrane alone, and with it the irritability of the bladder, and the corresponding desire to make water, which had rendered him miserable. It is the course to be pursued in all such cases. It has been invariably successful, in my hands, for more than thirty years, and laid the foundation for that practice which I shall presently explain, when the alteration of structure occurs further back in the canal. The mucous membrane is, then, capable of producing a particular septum-like contraction in its proper canal, without the participation of its elastic or muscular coats; and of giving rise to a permanent stricture, generally, however, curable. Repeated dissections have proved to me, however, that in other cases the external coats are always more or less implicated, and that the degree of implication is usually in proportion to the obstinacy of the stricture. Thus, for example, a stricture two inches from the orifice will be the most obstinate and the most difficult of cure, in which the corpus spongiosum is found to be hard and unyielding to the touch. It is only to be exceeded in obstinacy of resistance and difficulty of cure, when this part is smaller and harder—when it has in fact become impervious, or nearly so, to the blood, by which, in its erectile state, it ought to be distended. After a time, this hardened part communicates to the finger applied externally, and to the point of the silver sound used internally, the feeling of its being cartilaginous and elastic. It yields to the pressure of an instrument, is dilatable, but not removeable by dilatation in old cases, and returns by its resiliency to its ordinary state, when the distending power is withdrawn.

A gentleman finding great difficulty in micturition, applied to a practitioner of eminence in the Netherlands, who, after many trials, passed a gum elastic catheter into the bladder, as he supposed, and kept one there, changing it occasionally, for

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fourteen months. The water came by the side of it; and as the symptoms still continued unabated, the surgeon proposed to inject some warm water, with which he filled the rectum so full, that the patient discharged at once a pint or more per anum. He gave up the catheter, and came to London. The false passage began just anterior to the membranous part of the urethra, and the natural canal was so small, and the false passage so large, that everything took that road; and it was only after a great many trials, and after great attention and management, that a small gum elastic catheter could be passed into the bladder.—After a few days, this was increased in size; and as he was in the habit of using instruments, he had others made to suit himself, and went on to No. 14 I now advised him not to increase the size, as a little urine came through some old fistulæ in perinæo, but to pass a smaller silver catheter every other day. He suffered no uneasiness from his elastic No. 14, and used to walk the streets and dine at his club with it in the bladder, without thinking about it. One morning he left out his gum catheter; and on trying to pass a silver one the next day, he found, to his great surprise, the attempt to do so gave him excessive pain, and that it would not proceed even for half an inch. He came to me directly, saying a horrible spasm had seized him. I tried a No. 8, and found it would not go half an inch without great pain; a smaller one was arrested at three inches, by a spot which had heretofore shown little signs of disease, and was carried into the bladder with great difficulty.

This state of disease is not usually overcome by dilatation alone, however long-continued; and although the sensibility may be removed by different caustic remedies applied as sedatives, the complaint is not cured, nor the diseased structure removed.

That the muscular coat of a canal can exert an especial and long-continued influence upon it, without leaving any sign of a permanent contraction observable after death, I have had opportunities of seeing. It must, however, be admitted, that in these, the worst kind of elastic cartilaginous strictures, the inner layer, at least, of involuntary muscular fibres is involved in the disease, as well as the elastic areolar tissue, and add to the difficulty of cure.

A stricture of the urethra capable of causing much distress is, however, often formed by a simple fold of mucous membrane, of a semi-circular form, usually situated at the under part of the urethra, and not unfrequently more than the sixteenth part of an inch in thickness. When the irregularity takes a spiral or a longitudinal course, which is rare, it is less curable, and when the stricture is from a quarter of an inch to an inch in extent, it is commonly supposed that two or more points of inflammation have each given rise to alteration of structure, which under repeated attacks have formed, from contiguity of parts, the hard and almost cartilaginous mass alluded to.

The canal in front of a stricture does not seem to be influenced by it, as far as regards its permeability or elasticity. It remains in its natural state, unless affected by inflammation, although the actual surface or anterior part of the stricture itself is often extremely irritable, bleeding as well as being very painful on the slightest touch. The bladder, under constant action and straining, thickens, diminishes in size, becomes irritable, and impatient of its contents; whilst the urethra immediately behind the stricture becomes more irritable than before it. Little is wanting in such cases, to give rise to complete retention of urine, ulceration at the irritable spot, the effusion of urine into the surrounding parts, and the death of the patient, unless the *science* as well as the *art* of surgery is brought to his relief. In three cases, which I have had the opportunity of examining after death, these evils were brought on by the impacting of a small calculus in the posterior part of the stricture, the dilated part behind being as large as a small orange. This dilatation does not, however, always take place, more particularly when the stricture is immediately anterior to the membranous portion of the urethra: and the surgeon, when obliged to open this part in cases of obstinate retention of urine, must not only *not* rely on its occurrence, but, on the contrary, must not expect to find it. That an opinion is entertained and taught to the contrary, I am well aware; it arose, however, from one or two surgeons of eminence generalizing too much from a few isolated facts, and believing an accidental dilatation to be one of frequent occurrence. It is a miseonception I am particularly desirous of removing; for an inexperienced surgeon suddenly called upon to open the membranous part of the urethra in a case of retention of urine, admitting of no relief except by operation, might be much disconcerted at not finding such dilatation to guide him at the most important moment of his operation, but merely a urethra of the natural size.

It is an admitted fact, that when a stricture of the urethra can be cured by dilatation, this method should be adopted in preference to all others.—When it is found unequal to this object, recourse must be had to other means; and the application of caustics, such as the nitrate of silver and the potassa fusa, has been resorted to, sometimes with good, at others with bad success; but as they rarely or never succeed in effecting a permanent cure in intractable cases, whilst they often do much mischief, they are now seldom used by surgeons in general, although the potassa fusa has again of late been strongly recommended by my old student and friend, Mr. Wade, as being very successful in his hands. I refrain, however, from entering into this subject, the object of the present lecture being to inquire into those means which are supposed to lead to a permanent cure, or the nearest possible state to it in cases of the worst description. These means are operative—by division of the part diseased.

The operative processes for effecting these objects are two—one by opening the perinæum from *without*, and dividing the stricture; the other by dividing the stricture from *within*, by an instrument passed along the canal of the urethra.

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The operation of opening the urethra from the perinæum was known to the ancients. From the instruments which have been discovered, it was practised in all probability by the surgeons of Herculaneum and Pompeii. It was certainly known to the Arabians, Rhazes and Avicenna.—The older French surgeons called the operation "*la boutonnière*;" and are explicit on its difficulties and its dangers, particularly when they attempted it, in consequence of being unable to pass a staff or guide to cut upon into the bladder.—Colot, the lithotomist, says, in a case of a man in great danger, he passed a very small sound, as a last resource, down to the stricture in the perinæum, on the point of which he cut, and through the opening thus made he pushed another small sound into the bladder. Upon this he passed a director with some force, and then another between them, thus dilating and tearing the parts which had become callous. When the surgeon failed to open the urethra, and was near the bladder, he recommended a trocar to be pushed into it, or he opened it with a straight pointed knife, passed steadily on until the urine flowed, an operation which is alluded to by some modern writers, but which no one ought to do, even if it has ever of late been done. The views of our predecessors were however correct, although their operative methods were objectionable. Thus, Sebatier and Deschamps consider as nearly impracticable the operation I have proved to be exceedingly simple. Their successor, Desault, disapproved of it, and Chopart concluded his observations on the subject with the hope that surgery in its advancement would ultimately find the means of dispensing with it altogether; not conceiving for a moment that it would, by the aid of anatomy, establish it as the least difficult and the most simple and scientific mode of giving relief in cases of extreme danger from retention of urine.

I have alluded to these opinions that I may not suffer the reproach made against us islanders by M. Civiale, "that our neighbours of the other side of the Channel willingly forget, on this point, as well as on many others, what is done out of their own country;" and I admit readily, with him, that the operation alluded to cannot be attributed to either Hunter or Home. My able friend, M. Civiale, has, however, fallen himself into the error he animadverts upon, of occasionally forgetting his neighbours *d'outre-mer*. Thus, in a short sketch of operations of this kind, done by various surgeons, he notices those mentioned by Messrs. Brodie and Arnott, the former even by quotation, for the purpose of contrasting the difficulties acknowledged by him to exist, with the exaggerations, as he terms them, of the facility with which other English surgeons say it may be accomplished; but he does not quote nor even refer to those surgeons, of whom I may perhaps consider myself without impropriety to be the principal, from having been the first to recommend, not the operation he has commented upon, but *the other* which ought always to supersede it; to which he does not refer, although the first edition of my work on the "Anatomy and Diseases of the Urinary Organs" was published in 1830, the third in 1843.

M. Civiale, in summing up his objections, draws attention to a case published in America in 1844, in which, after various efforts made in vain to find the urethra from the perinæum, by an incision two inches deep and five inches long, the surgeon ended by failing to open even the bladder, by the knife, and had recourse to a trocar, which he pushed into it. The difficulties met therein, arose from the operation being done in the *wrong* place, and it was so in every case to which he has referred. *To find the urethra without the aid of a staff previously introduced into it, the operation should be performed through the raphé, in the exact central line of the perinæum, and not laterally* as in the operation for the stone. The directions for doing this I have given in my lectures since 1816, and have published since 1830; they are to be found at page 107 of my book, and are so precise as to be unmistakeble.

The patient being placed as in the operation for the stone, a straight-grooved staff or sound is to be passed down to the stricture, and held steadily against it. The rectum having been previously cleared by an enema, the forefinger of the left hand being duly oiled, is to be introduced into it, and the state of the membranous part of the urethra and the prostate is to be carefully ascertained. The principal object in introducing the forefinger, is to ascertain the relative situation of the upper part of the rectum and the urethra, which latter part is only in direct application to the rectum near the termination of its membranous part and the commencement of its prostatic portion. There is a certain distance, which is greater or less in different individuals, between the last inch of the rectum and the urethra placed above it. The two parts form two sides of a triangle, the apex of which is the prostate, the base the external skin; and it is within the two lines of the triangle that the operation is to be done. The surgeon, taking the grooved staff, or sound, in his right hand, whilst the forefinger is applied to the upper surface of the rectum, moves the point steadily upwards and downwards, so as to convey to the forefinger of the left hand a knowledge of the situation of the extremity of the instrument, and particularly of the distance between them; and which the motions given to the instrument by the right hand will clearly indicate. The thickness of the parts between the obstruction and the rectum can thus be estimated with sufficient accuracy, both at the point where the left forefinger is applied, and at the surface of the skin; for, although the membranous part of the urethra cannot be easily felt from an incision made on the left side of the perinæum, it is distinguished in the plainest manner from the rectum. The next step of the operation is to divide the skin, cellular membrane, fascia, muscular and tendinous fibres, which intervene between the upper surface of the rectum and the under surface of the anterior and middle portions of the membranous part of the urethra. This is to be done by a

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straight, blunt-backed, narrow, sharp-pointed bistoury, fixed in its handle; the point of which is to be placed on the skin, a little above the verge of the anus, the cutting edge being upwards, the blunt back towards the rectum, the handle being a little depressed, the point somewhat inclined upwards. The degree of inclination necessary to carry the knife inwards for the distance of an inch, and clear of the rectum, will be indicated by the finger in that part; and the eye of the operator should correspond with the point of the forefinger in the rectum, so that the bistoury may be steadily pressed in to that extent, then carried upwards, and brought out in the exact median line, making an external incision of at least an inch and a quarter to an inch and a half or more, as regards the external parts. If the perinæum is much hardened, and consequently unyielding, a transverse, curved, or crescentic incision should be made across it, the centre of which should correspond with the raphé, and be half an inch above the verge of the anus, or as near that distance as may be, with due regard to the safety of the rectum. The surgeon may then deepen the cut without fear, for the forefinger in the rectum will always inform him where the back and the point of the bistoury are. The opening will now be sufficiently large to allow the operator to lay aside the knife, and to feel for the urethra with the point of the forefinger of the left hand, keeping the end of the staff steady against the stricture, which will be readily felt, and through which the instrument will now sometimes pass with a little pressure. If it should not do so, the knife is to be resumed, and the forefinger being placed in the wound, on the outside of the rectum, which is to be depressed as much as possible, the back of the knife is then to be turned to it, and whilst the patient strains, the point should open the urethra, which it can do very easily, as far back, if required, as the apex or transverse portion of the prostate. It will not be necessary, however, to go so far back, and the membranous portion may be opened at its middle part with perfect safety. A probe should be introduced into it whilst the urine is flowing.

The bulb of the urethra, in the natural state, is not the pendulous part which it seems to be when dissected for demonstration. It is on the contrary closely applied to the under surface of the urethra, overlapping a portion of its membranous part, and especially and particularly the spot at and before its commencement, in which the most intractable strictures are situated. That there may be some equally unmanageable anterior to this part must be admitted, but *there are none behind it*. None are so impracticable, none so difficult of cure, none so distressing to the surgeon, whether under ordinary management, or under operation when impassable.

The bulb of the urethra, in all or any of these operations, must be divided, and has sometimes given rise to a dangerous hæmorrhage. This has never occurred in my hands, which may perhaps be owing to the care taken to divide the bulb exactly in its central part, where the two portions of which it is composed meet each in its respective sheath, thus forming a double partition between the highly vascular structures. Be this as it may, a hæmorrhage from this part may be very troublesome, but can always be arrested by pressure made in the wound, which should be enlarged upwards, if necessary, to allow of a greater facility for its performance. I place no reliance on the opinion which has been promulgated, that the division or a wound of the bulb is followed by sexual inconveniences. The distance from the surface of the perinæum to the membranous part of the urethra, near the apex of the prostate, is about an inch and a quarter in persons of the usual size and form. When the perinæum is very deep, it may be an inch and a half, but rarely or never more, as far as has been demonstrated by numerous experiments made for the purpose, and which have been lately repeated at my request by Dr. Beith, of Greenwich Hospital, with a similar result. If the membranous part of the urethra should be dilated, an opening is more easily made into it, but this must *not be expected, as it rarely takes place*. The patient should therefore be desired to make an effort to expel his urine, that the surgeon may have the advantage of feeling the distending effort with the point of his finger, as he opens the urethra. If the operation has been performed for retention of urine, the safety of the sufferer is ensured, and nothing more need be done; but as the patient, in submitting to an operation, expects that the original cause should be removed, reference must be had to the stricture, which is, in all probability, half, or at least a quarter of an inch distant from and above the opening which has been made to evacuate the urine. The grooved sound, or staff, in the anterior part of the passage, is now to be firmly pressed against the stricture, whilst a curved probe or director is, if possible, to be passed upwards, as far as it will go, to meet it. The operator has then the choice of dividing the strictured or obliterated part, upwards or downwards, as he pleases. After which, a catheter is to be passed, and fixed in the bladder; but if its mucous membrane should be very irritable, which is likely to be the case, the catheter should be withdrawn as soon as it is found to give rise to an increase, or even to a continuation of the sufferings of the patient.

Chloroform should not be used in an operation required *for retention of urine*. Its adoption is disadvantageous, inasmuch as there is oftentimes very great difficulty experienced in finding the opening made into the urethra, when the spot cannot be shown by the passage of the urine through it.

The introduction of a flexible gum catheter through the divided urethra into the bladder is usually mentioned by writers as a matter of course; it is, however, often one of great difficulty, particularly if the bladder should be empty, or the patient, under chloroform, cannot expel his urine when desired. When a common director can be, or is even, passed into the bladder, neither a silver nor an elastic catheter can always be

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made to accompany or replace it. A soft metallic director should in all cases be used for this purpose, and of a shape which allows the groove to widen rapidly from the point to the handle, to the extent of half an inch, forming a deep furrow, larger than the catheter to be introduced, and along which, when properly curved, after it has been brought out through the wound, it may be passed from the anterior part of the urethra into the bladder.

In a case of fistula in perinæo, through which the urine can always be discharged, the operation may be done at any convenient time, and the surgeon may, perhaps, prefer dividing the stricture first, although impassable, with the hope of having nothing more to do. To effect this, a straight, deeply-grooved sound is to be passed down to the stricture, and then made prominent in the urethra, until the external parts are all divided save its inner membrane. The prominent point is then to be withdrawn, and held steadily against the base of the obstruction, immediately above which the urethra is to be opened, and the smallest probe or the smallest director passed if possible through the stricture into the membranous part of the passage, and the thickened part divided. When a probe or small director will not pass, the division of the obstruction may become a matter of difficulty.—The soft parts, during these attempts, should be drawn asunder by small, flat, blunt, but bent hooks, which the surgeon should have had previously prepared for the purpose, so as to expose the obstructed part as much as possible, until he can effect his object of dividing it.

The operation I have thus recommended, and I believe I may say introduced into the practice of surgery, should be frequently done by the student on the dead body, after a small grooved sound or staff has been passed into the bladder. It may then be effected by one steady introduction of a straight-backed, strong-pointed knife; and whilst it is a momentary operation on the dead, it may be done on the living in three or four minutes, with all due precautions, even without the aid of a staff in the urethra. It must, however, be admitted that the operation cannot be done in every case without serious difficulty and loss of time, to the great distress of the patient, and particularly, I repeat—for the direction is important—if the bladder be empty. When any kind of solid instrument, however small, can be passed into the bladder, it becomes an operation of no import, as far as regards the mere division of the intervening parts, and may be done by any person of moderate knowledge in anatomy and surgery.

Mr. Syme, professor of surgery in the Royal Infirmary in Edinburgh, has lately recommended this or a similar operation to be performed in all cases of irritable and intractable strictures in which he could pass a grooved staff into the bladder, not as an absolutely necessary, but as a curative process. If he had had the misfortune to meet with a case in which he could not pass an instrument of any kind into the bladder—a misfortune which has occasionally befallen all surgeons of extensive practice amongst the poor or the unfortunate—I presume he would have done the operation precisely as I have done it and recommended it to be done for thirty years at least; and I cannot but regret, that he had not had the opportunity of knowing what I had done, and had consequently confined his observations to reprobating the old operation by the side of the raphé, the *boutonnière* of the French surgeons, which very operation mine was intended to supersede, and has indeed superseded, with most well-informed surgeons.

Case 1.—Reference was made to me, in Lisbon, in 1813, for my decision on a case of retention of urine in a soldier suffering from an impassable stricture, in whom an effusion of urine was immediately impending, whilst his anxiety and distress were great. The point of stricture could be distinctly felt through the very lowest part of the scrotum, at the commencement of the bulbous portion of the urethra, which was evidently dilated at each endeavour to force the urine through the stricture. The integuments being divided, I opened the distended bulbous portion with the same instrument, a straight bistoury, and the patient was immediately relieved. The stricture was then divided, and the man recovered, without a bad symptom.

Case 2.—In the year 1814, I assisted the late Mr. Pearson in dividing a hard, impassable stricture, at the commencement of the fore part of the scrotum. A catheter was placed in the bladder, and the wound healed after several weeks, with difficulty, bougies being passed from time to time as cicatrization took place, to maintain the passage at its proper size. At the end of a year he came to me for advice, being nearly as bad as before the operation, the division of the part not having been successful in preventing a return of the disease.

The patient in this case received no permanent benefit from this operation as a curative process, although it was of great advantage to him at the moment; and if he had passed his bougie carefully from time to time, a complete relapse would have been prevented, and he might have remained in good health. The inconvenience in dividing the urethra in its pendulous portion, arises from its disclination to heal, and its aptitude to form a fistulous opening, a result so common, that an incision should never be made into this part, if it can be avoided by the adoption of any other means.

Case 3.—The late Dr. O'Halloran, of the 60th regiment, suffered many years from stricture, and having attended my lectures thirty years ago, and heard my opinions on this subject, and seen me do the operation, found, when in the West Indies, some three years afterwards, that a stricture he had neglected had become impassable, and that he could not make a drop of water. Being a man of great resolution, he determined on dividing the stricture himself, which he did before a glass, opening the perinæum immediately behind the lower part of the scrotum. The recovery was speedy, and the cure complete, as he assured me

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some years afterwards, he having no occasion to pass an instrument to keep the passage in its proper state.

Case 4.—In November, 1827, I divided the perinæum in its central line, opened the urethra in its membranous part, and divided a very intractable stricture upwards, in the person of Lieutenant Y——, of the Royal Navy, Mr. Travers being present. The operation was successful as far as the immediate relief obtained, although the patient did not eventually recover, dying from disease of the bladder and kidneys.

I have related other cases in which this operation was done, in my work on the "Anatomy and Diseases of the Urinary Organs," to which I may now refer you, with respect to my having constantly done this operation with complete success, although all required a bougie to be occasionally passed to prevent a relapse.

Case 5.—R. M—— was sent by me to the Westminister Hospital, in 1843, with an effusion of urine into the scrotum, in consequence of a stricture having been divided in the urethra, with such constitutional derangement of health as to render his recovery very doubtful. At the end of eleven weeks, I divided the stricture through the perinæum, but did not succeed in passing an elastic catheter along the urethra into the bladder, until the next day, when the bladder was full. This he wore for ten weeks, and now keeps the passage clear by passing a No. 9, from week to week, which, if he neglects for three weeks, he finds a difficulty in doing.

Case 6.—A gentleman has been under my care for several years, at different times. The first time he recovered so as to be able to pass a bougie the size of the urethra with ease. From neglect his complaint returned; the strictures, particularly the one at the bulbous portion, became irritable, and he could not bear it to be touched. He tried the cold water cure in Germany, and pronounced himself well; his sufferings however returned, and he underwent a year's treatment in Paris, with some little benefit, being obliged however to pass a bougie himself occasionlly. In this state he came under my care for the third time—that is, as far as letting me see him pass a very small bougie for himself, for he could not bear any one touching him. I persuaded him to try some chloroform, and let me, when under it, divide the stricture. The use of chloroform, being then in its infancy, did not succeed, and he left London much better in health, but by no means free from inconvenience. Hearing that he had had his stricture divided by a section of the perinæum, I inquired his state. The following was the reply some five months after the operation had been done: "Yes, I have had my stricture divided, on the 13th or 14th of last November, under chloroform; with me it has not succeeded. I of course suffered a good deal for the first week or so; indeed, more I think than I ever suffered in my life. It produced stoppage of water, and hot and cold fever, accompanied by weakness and depression for the first ten days or so. At the end of six weeks I was certainly better for a short time than I had been before the operation; I mean, as far as regards my water-works, but that did not last, and I now am confident I have derived no benefit at all. You ask me as regards the effect it had on my bladder. I must tell you, that for the last two years, from pure air, and a very quiet life, the diseased state of my bladder has been gradually subsiding, without any treatment; indeed, since I left you in London, now near three years, I have not consulted any one except for this said operation, which, by the way, was not done in Glasgow, as you suppose, but in Edinburgh, and it has not succeded. I do not mention the surgeon's name, for he did his very best for me. I pass a No. 4 French gauge, have an occasional pain in my back, and am obliged to take morphia at night, but not so much as formerly."

If this gentleman had returned to London, I should have performed this operation, and I presume with a similar result. I am better satisfied it has been done by another, it being the case of all others I am or have been acquainted with, I should have selected for a trial of the real value of the operation in effecting a permanent cure.

Mr. Stanley has lately shown me, in St. Bartholomew's Hospital, three persons in whom he had opened the urethra by a central incision, all bad cases, in which effusion of urine had begun, rendering the operations imperatively necessary. In one done twenty-two months back, there is still a fistulous opening in the perinæum, through which half his urine passes. In the second, the stricture was divided at the upper part of the scrotum; the opening is fistulous. In the third, the urethra was laid open, in September last, from the upper part of the scrotum down between the testes in its lower part, where some urine still escapes. The lives of all three were saved by the operation.

Case 7.—G.E——, in 1840, when twenty years of age, in vaulting over a gate, fell upon it and struck the perinæum. On trying to pass his water a good deal of blood came away, and he suffered much pain. Cold was applied, but an abscess formed in perinæo, which was opened in London. It was now found a bougie would not pass, and after a good deal of force, a false passage was made, which eventually led to an operation in the perinæum for the division of the stricture, which was done by a lateral incision, enlarged transversely. Fever supervened, but ultimately a No. 9 catheter was passed, and at the end of ten weeks the wound healed, and he was enabled to pass a No. 6 soft bougie for himself. In 1843 he went to India, and after an attack of dysentery, having neglected the use of his bougie, was attacked by a retention of urine, and from that time suffered greatly until he returned home in 1850, and put himself under the care of Mr. Guthrie. The orifice of the stricture was so narrow that a cat-gut bougie of the smallest size would rarely enter it; the bougie, of whatever kind, generally taking the false passage, the irritation of the bladder and the desire to make water being always great and scarcely relieved by opium. All the symptoms

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were now aggravated by gonorrhœa, after which he went into the country. On his return to London, advantage was taken of Mr. Avery's reflector to look at the orifice of the stricture, and a small solid silver sound was passed through it, but nothing would go further than before, nor beyond seven inches, the sensation described being that of the gut being raised on the point of the instrument, which could be felt per rectum but not in the bladder. Under these circumstances, I opened the perinæum and urethra, dividing the stricture upwards. Great difficulty and delay were experienced in getting a director, either small or large, into the bladder, from his not being able to pass urine, and from the obstruction at the neck of bladder, on which the end of the instrument caught. A gum catheter was however introduced, but from the irritability of the patient often slipped out and was replaced with difficulty, and only after taking a particular curve, which carried it over the bar at the cervix of the bladder. The patient can now pass a No. 12 for himself, having an especial curvature, and will not hear of the bar being divided. A small fistulous opening remains in the perinæum, allowing a little urine to pass through, when he does not cover it with the point of his finger. He is otherwise free from uneasiness and in perfect health.

Mr. Stafford's plan of treating stricture of the urethra by the lancetted stilette; Mr. T. Wakley's dilating instruments; M. Le Roy d'Etiolles' system of treatment; Cases of irritable, impassable, and intractable stricture; Division of a stricture from behind forwards, and from before backwards; Dangers to be apprehended from these operations. Conclusions.

The operation for the division of a stricture from before backwards, or by passing an instrument along the urethra to the obstruction, is due to Mr. Stafford, and is effected by means of a silver tube, made in the shape of a straight or curved catheter, containing a lancet or other shaped knife, which can be protruded, and again withdrawn through a slit in the point, to such extent as may be deemed advisable, by means of a spring at the other end or handle. With an instrument of this kind, a simple bridle stricture, or one of an eighth of an inch in thickness, may always be divided with little risk or difficulty; but when the obstruction is of greater extent, and of a more solid consistence, the operation is attended with some danger, and has even failed altogether. When the obstruction is at the termination of the bulbous part of the urethra, the slightest error in the direction of the instrument leads to the formation of a false passage, and the object of the operation is defeated, whilst the subsequent attainment of the right road is rendered much more difficult, and sometimes impossible.

The enlargement shown in figure 1,* which the bulb makes when distended by injection, can always be caused, in a healthy person, by a moderate pressure made at the lower part of even a natural obstruction, if there be one, so as to cause the point of a silver instrument to stop at it so steadily, that a change of the position of the point can alone carry it past the obstacle; but on this change being made, a full-sized instrument can be passed over the natural obstacle formed by the fascia beneath into the bladder. With a small sound or catheter, an inexperienced surgeon will frequently find at this part what he calls a stricture; and a better but perhaps less honest surgeon can always make one to answer his purpose, until at last he may really render a natural obstacle a source of disease.

When a bad stricture exists at this part, and bougies have perhaps been passed irregularly for years, or until it becomes intractable or impassable from neglect, this dilatation will always, as a general rule, be found to exist; and as the surface of the stricture is hard and resisting, whilst the dilated part is softer and more yielding, the end of any instrument will certainly be borne against it, and a false passage may be readily made. This is a surgical point which experience alone can rectify; nevertheless, a distinct acquaintance with the fact will go far to prevent the evil. It will not, however, suffice without a correct knowledge of the relative situation of the parts, in health and under disease, which is their true anatomy. A mere knowledge of their structure from books, however accurate, will be of no use in this operation. The surgeon must depend on his experience, which may be called knowledge—on his head, his eyes, his hands—for all must be engaged in it. It is an operation of dexterity, rather than of difficulty, in bad cases. In slight ones, it is hardly worthy of consideration, and is often thoroughly successful.

For the purpose of securing the passage of the dividing instrument in the right direction, Mr. Stafford proposed to pass a fine wire through the stricture in the first instance, and then to run his knife along it: a grooved director has been suggested by others. The difficulty is, however, to pass the wire or director; for when a wire can be safely passed through a stricture into the bladder, the disease ceases to be immediately dangerous; the urine can be drained off, and the passage may be quickly enlarged, so as to admit of a safer mode of proceeding—viz., by dividing the obstruction from behind forwards. This enlargement can be accomplished by running a hollow instrument over the wire which has been passed, after the manner lately recommended by Mr. Wakley, junior, and it is impossible to speak too highly of this invention,—or as it is disputed as an invention, and claimed by others,—of its re-introduction into practice, as a means of effecting either a slow or a rapid dilatation of the urethra. It is, like all other potent means, liable to do much mischief as well as good, when in incautious hands; and in cases of long standing cannot effect a permanent cure any more than any of the other dilating methods more commonly in use. It is capable of rendering great service when the withdrawal of a sound or catheter cannot always be

* Lancet, August No., p. 97.

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certainly followed by the re-introduction of another, and which withdrawal it renders unnecessary until a larger one is introduced over it—a very great improvement, which no surgeon should neglect, for when this can be done, no operation is immediately necessary. M. Le Roy d'Etiolles has recommended a similar mode of cure, or of forcible dilatation, by passing in immediate succession several graduated instruments until the last fills the urethra; thus stretching or lacerating the stricture, sometimes effecting a cure in a few days, sometimes giving rise to inflammation of the bladder or other evils, which few people like to contemplate. These means, as methods of cure, can then only be recommended when from circumstances the patient cannot afford time for more gentle treatment. They succeed frequently when the disease is confined to the mucous membrane; and some of the best and most prominent cures I have effected have been in such cases, and when I have felt that the edge of the stricture has caught upon and yielded to the pressure of the point of the instrument: whence my predilection for the more surgical proceeding, by division from behind forwards, when it can be effected. M. Le Roy d'Etiolles sent me his book, which I fear some gentleman has borrowed without leave, and M. Baillière, of Regent-street, could not procure one in Paris even from M. Le Roy himself, it being out of print, which prevents my further notice of this and of his other ingenious methods of treatment.

When no immediate urgency presses for the hasty completion of an operation, as in ordinary cases of intractable stricture, permeable to a certain degree to the urine, although not to an instrument, it is always best to proceed with gentleness; for I have often found that an instrument can be introduced at one time, when it totally fails to proceed at another. Mr. Syme has denied the impermeability of stricture to a small instrument under any circumstances, which denial does not gain implicit credence with the best informed members of the profession of surgery, although all ought, and I hope do admit, that his efforts to impress on the members of that profession the necessity of continuing their endeavours to find a passage until they succeed if it be possible, are deserving of the highest praise.

The width or extent of a stricture can always be ascertained when it is passable by a small silver or whalebone sound having a little bulb at the end, which, on being withdrawn, is caught behind the stricture, and comes through it with a jerk, thus showing its thickness.

Case 8.—An officer applied to me with two strictures, one an inch from the orifice of the urethra, the other at about four; he suffered greatly from irritation and a frequent desire to make water, which rendered his life very uncomfortable, although he could pass a bougie of small size easily. Both strictures were divided on different days with facility, one from before backwards, the other from behind forwards, and the cure was rapidly completed. This gentleman does not pass a bougie, has had no return of the complaint, has married, has three children, and boasts of his cure.

Case 9.—A gentleman had been under the care of several surgeons as well as myself, and could pass a No. 14, and even a 16, in a satisfactory manner, but his uneasiness about the bladder and urethra was not removed; and if he neglected to pass his instrument for a couple of months the canal contracted a little, so as to only take a No. 12, and a slight ridge was felt as the sound passed over the part. This I divided, with the happiest effect; the uneasiness was no longer felt, and he now only passes his sound to be quite sure his complaint is not returning, but not to prevent its return.

Case 10.—A serjeant of exemplary character was sent to me by his commanding officer, suffering from an impassable stricture, and rendered thereby unfit for further service unless I could give him relief. The stricture was at the bulbous part of the urethra, through which I could not pass either a soft or a solid instrument without more force than I thought fit to employ. A slight division of the face of the stricture enabled me to carry a small silver catheter through it, which was retained in the bladder. Exchanged in succession, for others somewhat larger, the cure was apparently completed by dilatation, and he returned to his duty free from complaint, with the direction to pass a solid sound once a week. This he failed to do, and in less than two years he returned to me nearly as bad as before. The stricture was entirely divided this time, and he again returned to his regiment. He has remained well many years, not forgetting to pass his sound from time to time, that he may be sure his complaint shall not return.

Case 11.—An officer of the navy applied, in consequence of an intractable stricture at the termination of the bulbous part of the urethra. He had been under thirteen different surgeons, who had never been able to pass an instrument into the bladder, and was subjected to rigors amounting to a paroxysm of ague, whenever the surface of the stricture was irritated by even moderate pressure. It was evident to me that nothing but incision was likely to succeed. A slight one rendered the small orifice of the stricture more open, and a very small sound was with some difficulty carried into the bladder; this was replaced by larger ones until he could pass a bougie equal to the size of his urethra, which he does from time to time, and remains well, although the occasional passage of the bougie is necessary to prevent a relapse.

Case 12.—An officer of the Indian army applied to me in consequence of a hard elastic stricture at the termination of the bulbous part of the urethra, on its becoming membranous, which gave him great annoyance, though passable and dilatable. The dilatation could not be maintained by any sized bougies. The obstruction was always felt by the instrument in passing over it, and more or less uneasiness was always present. As he was desirous of being relieved at all hazards, I divided the hardened part, or ridge, with a full-siz-

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ed instrument, which then passed into the bladder with ease. A little discharge of blood took place, but not more than frequently follows on such occasions. The next day I found that he had had an oozing of blood all night, that he could not make water, although the desire was constant, and was in great pain, the bladder being much distended. He had had rigors in the night, followed by considerable fever, thirst, foul tongue, headache; the oozing of blood continued, accompanied by the occasional discharge of a few drops of bloody urine, and of some clots of blood. A middle-sized silver catheter passed with ease, although very little bloody urine came through it, and it was evident a larger quantity of blood had passed backwards, and coagulated in the bladder, than had been discharged externally. Relief was given by injecting the bladder from time to time with warm water, by opium, and the hot bath, &c. The cold and hot paroxysms of fever returned regularly, which he considered to be his Indian malady, and were ultimately arrested by quinine. His complaint was, however, cured and has not returned during the last six years, as he calls to be examined from time to time. This was the most distressing case of hæmorrhage I have met with, although it sometimes occurs, but to a less extent, after this operation, but not sufficient to excite alarm, or give rise to any serious inconvenience.

Case 13.—C. P—— applied to me on his return from India in a miserable state of health, unable to make water even in a small stream, from strictures, which admitted with difficulty the smallest bougie. The first was situated two inches from the orifice; the second at the junction of the bulbous with the membranous portion of the urethra, under which he had laboured for several years. The first could be felt as a very hard swelling in the under part of the urethra, nearly half an inch in extent, and on which dilatation and caustics, used by different surgeons, had made no permanent impression. This part I divided from before backwards, so as to admit a No. 6 catheter, which after a time passed through the second, and his health rapidly improved as the irritation was removed. The hardness in the first stricture did not diminish, and it was again divided, so as to admit a No. 9. A small calculus was now discovered behind it, lodged in a hollow it had made for itself, and in which it had perhaps increased in size. This, after repeated trials and the further division of the stricture, was happily brought through it, but passed the orifice of the urethra with great difficulty. A catheter the full size of the urethra was kept in the bladder, and the posterior stricture was removed, but the anterior one remained hard and frequently somewhat irritable, although his health was quite restored, and he could pass a No. 8 easily. It was again divided as deeply as was thought advisable, and the nitrate-of-silver ointment applied, which always removed the irritability; so that by passing his bougie himself, and by occasionally applying the ointment, he kept himself in good health. With the view of making a more permanent cure, a consultation was held, and the iodide-of-potassium ointment applied externally and internally, instead of the nitrate-of-silver ointment, but did not answer so well. He ultimately returned to India in excellent health, satisfied to pass his bougie and use his ointment occasionally. He has remained free from inconvenience, having since his treatment passed several small lithic acid calculi with little difficulty, although the hardened ring of the stricture was always to be felt, and is still, I have no doubt, perceptible.

Case 14.—A poor man was admitted under my care into the Westminster Hospital, with a diseased bladder and strictures, the first of which, about two inches from the orifice, had become impassable, so that his water, which he could before only make by drops, was now entirely retained. As he had suffered much, and appeared to be in an almost irrecoverable state of health, requiring immediate assistance, if it could be given in time to be of use, I divided the *first* strictures, which were hard and double, extending for an inch, with a small interval between them, with an instrument as large as the orifice would admit. This gave him great relief, as he could then pass his water in a small stream. Two days after, some urine came through into the skin of the penis and scrotum, which required to be divided to allow of its exit, and a fistulous opening would thus have been made, if the man had not died exhausted by the long continuance of his complaint.

Case 15.—A short, fat gentleman, of sixty-three, informed me, in May, 1850, that he had been under my care, for retention of urine, twenty years before, and that he had left me when I could pass a No. 12 with ease, being as large an instrument as would enter the orifice of the urethra; and that he had done nothing since. He was nearly as bad as before, his water passing only by drops. The obstruction was at the termination of the bulbous portion of the urethra; and although a very fine gum elastic or catgut bougie could be made to enter the stricture, and stick fast in it, neither they, nor the smallest solid one, would proceed, without a force being used which I considered incompatible with safety. Having neglected to call for a few days, he sent for me, saying he was totally unable to pass a drop of water, and had not done so for nearly two days, the bladder being distended as high as the umbilicus. There was no time to be lost, if his life was to be saved. I therefore divided the obstruction, which was very thick and tough, with great difficulty. The cutting part being sheathed, the instrument could then be felt per rectum, advancing to the prostatic part of the urethra; but it would not enter the bladder, nothing could make it do so. It evidently caught upon something at the very entrance into it, and I concluded it must be on the bar I have indicated as often existing at this part. This I divided; the instrument then entered the bladder, and three pints of urine were drawn off through it, when it was exchanged for a soft metallic catheter. The general bad symptoms gradually subsided, the urethra remaining hard and

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lump? where the division had taken place. In August, I took my leave of him, in a very comfortable state, passing his gum catheter twice a day, and making his water occasionally very well. At Christmas I saw him, when he declared himself free from any uneasiness. In February, he suffered an attack of bronchitis, for which he did not ask my assistance, although I paid him a visit of condolence, declaring himself well of my complaints—that is, of the bladder and urethra. In April, he died from a fit of apoplexy, and his friends would not allow of an examination. The surgeon who attended with me did not hesitate in saying, that if I had performed the operation by opening the perinæum he would not have lived many days.

Case 16.—H——, returned to England from Australia, in July, 1848, having suffered severely from an impassable stricture, placed himself under the care of several very eminent surgeons in London, who tried various methods and inventions, and ended by making him a false passage, admitting a No 7 for eleven inches, but which could not be got into his bladder. All this time he suffered severely in his health, from repeated attacks of aguish rigors, and was told, at last, that nothing could cure him but being cut in the perinæum, to which he had a serious ojection; and instead of going to Edinburgh, as advised, returned from the country to London, and was advised by the subject of Case No. 8 to go to Mr. Guthrie, with the determination to be cut on the inside of his urethra, if he pleased, but not on the outside. The operation was performed, after due preliminary examination, on the 27th of March, and a catheter introduced, which gave him great relief with respect to his water, but was followed by some fever, but was not sufficient to prevent his going to Mr. Guthrie's house after the first few days. A swelling then formed at the anterior part of the scrotum, which was opened, but contained only matter, without any sign of urine. Pain, supposed to be rheumatic, next affected the back part of the left shoulder, and was soon followed by swelling, without discoloration. As this was supposed to contain matter, it was punctured, on the 30th of April, by a very small trocar, and six ounces of good pus were allowed to run through it. The operation was repeated every second or third day, for three times, when the little opening was enlarged, and the discharge gradually ceased. A No. 12 silver sound was passed every other day, and he left London, doing it for himself, at the end of May, in health and spirits. This gentleman was fortunate in having his matter deposited first in the scrotum, and afterwards under the muscles of his back.

The division of a stricture from behind forwards, implies that it is passable by an instrument of moderate size, say a No. 4, 5, or 6, and that the operation is not consequently one of necessity but of choice, with the hope that it may lead to a permanent cure, which it is very likely to effect. In many cases of intractable strictures, I have found it advisable to puncture the fore part, without attempting to divide the whole thickness of the stricture at once, and have thus been enabled in many instances to introduce an instrument which cut from the side and not from the point, thus depriving it of its most dangerous quality. The instrument I place before you was made more than twenty years ago, by Messrs. Philp and Whicker; it is one of several, having each a somewhat different inclination. The instrument is round, straight, and of equal size throughout unto the end, the under part of which forms a bulb or ledge sufficiently developed to catch against the stricture when passed through it, and then withdrawn until it meets with the check the inner side of the stricture occasions by catching against the ledge or bulb. The cutting part being then protruded on the under side by the pressure of the thumb on a spring, the instrument is to be drawn through the stricture, which it divides; the pressure of the thumb being removed, the cutting part returns into its sheath, or it may, if found necessary, be pushed forwards through the stricture, thus deepening and completing the cut already made, or even making another by the side of the first, if thought advisable. The operation thus simplified may be repeated if required with a larger instrument, until the wall of the urethra itself, as well as the stricture, are both completely divided, if it should so please the surgeon; a proceeding which appears to me to be of more than a doubtful nature. The error, when one is committed, lies in trying to do too much at once, for although an insufficient incision will not effect a cure, there is no difficulty in augmenting either its length or its depth, when the insufficiency is manifest. It is a point to be acquired by experience, and the surgeon will soon learn that the incision, however well made, is never equal to the width of the blade of the instrument, from the natural receding of the parts. It should extend from a little behind, quite through the stricture, and about a line in front of it, and a ledge should not be left behind on which the point of a bougie can hitch. When the division of the stricture has been accomplished, a straight sound, very slightly conical at the point, should be passed through it, until the distention *begins to give pain*, when it should be withdrawn, to be re-introduced again next day; until by successive introductions, and if necessary by successive divisions, the thickened or hardened parts have been absorbed, and the canal becomes free.

The division of a stricture, whether done from behind forwards, or before backwards, gives rise in some persons to a sympathetic fever, resembling ague, which may continue for several days; but the same thing takes place in many irritable habits from the mere introduction of a common bougie, and is an evil which cannot always be avoided by the greatest care or gentleness. I have known a hæmorrhage of a more serious nature follow, in the ablest hands, the introduction of a common silver or elastic catheter, than that which sometimes supervenes after the division of a stricture. If this should not cease, in due time, under the application of very cold or iced water, a full-

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sized bougie should be introduced into the bladder, and pressure made upon it at the part injured. When much force has been used, or the outer wall of the urethra has been too much implicated, an ecchymosis of the external parts is said to take place, although it has not occurred to me. Urine may be extravasated, matter may form externally, or be discharged in quantity from within. These are accidents it is proper to enumerate, and which may befal any one, although they do not often occur, and are not to be expected when the treatment is conducted with sufficient caution and judgment.

In whatever manner the urethra may be divided, whether for a stricture only, or for a fistula in perinæo, any and every operation may lead to the excitement of a fever resembling ague in its paroxysms, and to the formation of matter in different parts of the body in a similar manner to that which I believe I was the first to show did often happen after amputation. It is a misfortune which cannot be avoided, and he is fortunate in whom these depositions of matter occur in parts not essentially vital, as in Case 16.

Case 17.—J. G——, aged thirty-one, has resided fourteen years in India, and has suffered from stricture during the whole of that time.—"In 1838 a No. 8 could be passed into the stricture, but not into the bladder, which relieved me a little, but a discharge remained. In 1842 a No. 4 would not pass. In 1845 a No. 9 would go through the first obstruction, but not into the bladder. In 1849, being worse than ever, I placed myself under another surgeon, who succeeded in passing a No. 1 into the bladder, and at last a No. 9, but only with great pain and force, so that it could not be withdrawn, except by putting a purchase upon it to pull it out. A swelled testicle, and an abscess in the scrotum, followed this treatment, and a gleet has been present since 1838, with great irritation and suffering. In April, 1851, I applied to Mr. Guthrie, having come from India for this purpose. He passed a small 5 with difficulty, and stated that I had three strictures—one half an inch from the orifice, which felt like a ring; the second, immediately in front of the scrotum, which felt hard, like a cord, for the space of an inch; and a third, at the curve, which he called a natural obstruction, but against which for several years my bougie always stopped. Mr. Guthrie divided my second stricture from behind forwards, so as to admit a No. 8 with ease, and which removed at once all my sufferings.—The first stricture was divided a few days afterwards, and a No. 11 went into the bladder without difficulty, leaving me in a perfect state of bliss. I can now pass a No. 13, and think myself cured."

I have, Mr. President, selected these cases from a great number, because each proves a leading point; and from them I shall now draw such conclusions as they appear to admit, having far outrun the time you have been pleased to allot for this lecture.

Conclusions.—1. That a hard and elastic, or an intractable stricture is never permanently cured by dilatation, or by the application of caustic, although it may be materially relieved by the regular periodical use of a dilating instrument.

2. That the division of an old, hardened, or elastic stricture through the perinæum is not usually followed by a permanent cure, although it is always attended by immediate relief; the disease being apt to return unless a solid sound or catheter is occasionally passed to prevent it.

3. That the operation of dividing the perinæum and urethra in such cases is sometimes attended by severe hæmorrhages, by fever, and is occasionally followed by fistulous openings, giving rise to much inconvenience.

4. That such division does, in some instances, effect a permanent cure.

5. That the division of the urethra through the external parts should never be attempted in any portion of it anterior to the bulb, such operation not being necessary; for the narrowest stricture of the pendulous or movable part may always be divided internally with much less comparative danger than by the external incision, inasmuch as the instrument can be guided through this part by the finger and thumb of the left hand of the surgeon with a certainty almost unerring.

6. That the stricture considered by all surgeons as the most important and difficult of cure—viz., at the termination of the bulbous portion of the urethra—may always be divided, when impassable, by a *straight* instrument, and in general more easily than by a *curved* one; the use of which is founded on the erroneous belief that the stricture is situated in the membranous part of the urethra, instead of being, as it is, anterior to it.

7. That the division of a stricture should, if possible, be effected by an instrument passed through it, and cutting from behind forwards, rather than from before backwards, although a combination of both methods will frequently be necessary to ensure success.

8. That the division of a stricture by these means will not always ensure a permanent cure if more than the mucous membrane is implicated, unless such parts be divided also.

9. That in cases of intractable stricture, the mucous membrane, the inner layer of involuntary muscle, and the elastic tissue external to it, should be divided, when the operation is done from within, but not the outer layer of muscular fibres, which should remain as a barrier between the stream of urine and the common integuments of the external parts—an accuracy of division not always to be attained: whence, perhaps, the difficulty of effecting a permanent cure.

10. That when a permanent cure is effected in these cases, the divided elastic wall of the urethra is not re-united by a structure exactly similar to itself, but by common areolar tissue, rendering the part more dilatable under the pressure of the stream of urine; the formation of which dilatation can be aided during the progress of the cure by pressing on the divided part with the point of a solid instrument passed daily for the purpose of preventing, if possible, that contraction which

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always takes place during the process of cicatrization; a proceeding which cannot be advantageously adopted when the parts are divided through the perinæum, lest it should encourage the formation of a fistulous opening, to which there is always a tendency.

11. That in cases of intractable stricture accompanied by one or more fistulous openings in the perinæum, in *young persons*, or of middle age, the operation through the external parts, or along the urethra, may be resorted to at the pleasure of the surgeon with an equal chance of success, provided the division of the obstruction or bank preventing the free passage of the urine be effectually divided, the *sine quâ non* of the operation.

12. That the operation within the urethra should always be preferred in *elderly* persons, particularly if somewhat stout or fat, as less likely to create severe constitutional disturbance, as shown in Case 15; and if this operation should fail from any cause, it by no means interferes with the due performance of the other through the perinæum, which in serious cases then becomes imperative, as the last resource capable of giving relief.

Clinical Lectures
ON
DISEASES OF THE CHEST.

Delivered at the Hospital for Consumption and Diseases of the Chest.

By THEOPHILUS THOMPSON, M.D., F.R.S.,
PHYSICIAN TO THE HOSPITAL.

LECTURE II.

Further illustrations of cracked-metal sound. Gangrene of hand. Obstruction of arteries by coagula. Hæmoptysis: its relation to consumption; causes, tendencies, and treatment.

At our last lecture, gentlemen, you had an opportunity of examining a patient in whom the cracked-metal sound was elicited by percussion. Here is another patient in whom this sign may be detected—namely, S. A. M——, a young woman, aged sixteen, admitted October 28, 1850; was born, and has always resided in London. Lost her father, mother, and sister from phthisis. Attributes her illness to getting her feet wet twelve months since, after which she began to cough, and shortly afterwards to expectorate. The expectoration six months since was very copious; on one occasion it was for a day and night offensive in taste and smell, and appeared to her to come in large quantity from the left side. At the time of admission she was subject to frontal headache; appetite good, but tongue red, and bowels relaxed; pulse 98; respiration 32.

Physical signs.—Flattening beneath both clavicles. Right side: Defective expansion; dull percussion; cavernous respiration, and cough. Left side: Very slight movement in inspiration; percussion sound still duller than on the right side. *Bruit de pot fêlé* elicited by striking smartly the second intercostal space. The treatment adopted in this case, in addition to attention to special symptoms, has been the administration of half an ounce of cod-liver oil, at first twice, subsequently three times a day. The improvement in her general health is very decided, and you would not suspect from her appearance the existence of any serious disease. I call your attention to her case, not only as an example of the cracked-pipkin sound, but also as an encouragement to preserving treatment, even in seemingly hopeless cases; for the evidence of large cavities in each side of the lungs is conclusive.

You recollect the explanation formerly given of the cause of the cracked-metal sound—namely, the escape of air into a large bronchial tube from a considerable cavity, with yielding walls so near to the surface of the chest as readily to receive an impulse from the stroke made in percussion. Since last Wednesday a poor woman, J. B——, has died in the hospital, in whom, during the whole period of her stay, this particular sound was remarkably distinct on making percussion under the left clavicle. I now exhibit the corresponding apex of the lung. You observe that it contains a cavity large enough to admit a melon, and that the pulmonary substance is at one part so much destroyed, that a portion of the cavity is absolutely bounded by the pulmonary pleura. Two or three bronchial tubes are seen opening into the cavity, one of which enters abruptly, and communicates directly with the left bronchus. Thus you perceive that all the conditions above described as contributing to the production of the cracked-metal sound, are distinctly fulfilled. There was another circumstance of considerable interest, and indeed of rarity, in this patient's case:—On December the 15th, about a month before her death, she complained of numbness, followed by pain of the left hand, fingers, and arm, and these parts, on the 17th, were observed to be slightly livid; this lividity extended to within an inch of the wrist in front, and an inch and a half on the dorsal surface of the hand. The cuticle was raised into a vesicle on the dorsal surface of the first phalanx of the index finger. No sensation evinced when tried with a pin within an inch above the wrist. Temperature of the left dorsum, 76°; of the right, 93½°. Temperature of forearm also diminished, and superficial veins distended. No pulsation to be felt in the radial artery; pulse 118; bowels confined. To have a drachm of castor-oil immediately, and repeated when necessary; a grain of watery extract of opium at night; and every four hours an ounce of the following mixture:—Half a drachm of sesquicarbonate of ammonia; three fluid drachms of spirit of sulphuric ether; five drachms of syrup; five ounces of decoction of Peruvian bark. Hand and forearm to be enveloped in cotton wool.

On the 21st, the lividity was in part replaced by redness, and sensibility had extended a little below the wrist. The pulse, which on the 18th was 180, was reduced to 104. The watery extract of opium has been given for three days every six hours. To have six grains of chlorate of

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potash, with an ounce of decoction of bark, and a drachm of syrup, every four hours, and to continue the opium every four hours.

22nd.—Passed a restless night, dozing from time to time for ten minutes; pulse 94; temperature of left dorsum, 72½°.

23rd.—Pulse 92; temperature of left dorsum, 66°; of right, 81°; of inside of mouth, 94°; bowels confined; no pulsation below the subclavian. Morphia, in quarter-grain doses, substituted for the watery extract of opium, and castor-oil repeated At night a turpentine enema was administered with good effect.

24th.—Pulse 98; tongue dry; lividity partly superseded by redness; hand and arm very painful, especially when the cotton wool is temporarily removed. An additional allowance of brandy, wine, and eggs; a grain of opium at bedtime.

25th.—Pulse 104; commencing discoloration of forearm; appetite improved. Two grains of opium at bedtime.

26th—Passed a better night, but lividity extending on the dorsum; no sensibility until an inch and a half above the wrist on the anterior surface, and three inches on the posterior surface of the forearm.

28th.—Pulse 98; arm more painful. Ten drops of sedative solution of opium every third hour and a half, and a drachm at bedtime, gave considerable relief. She continued gradually losing strength, notwithstanding the free use of stimulants.

On the 8th of January, the temperature of the left dorsum was 70, and vesication had taken place on the anterior surface; forearm semiflexed; hand fixed in a position midway between pronation and supination; discoloration half up the arm in front; three inches and a half behind; pulse 116; expectoration very difficult. The quantity of chlorate of potash was increased, and the opiates and stimulants continued.

On the 10th, diarrhœa; a rapid weak pulse; legs and feet increasingly œdematous.

Died on the 11th, at half-past two A.M.

It was pretty evident that some cause had interfered with the circulation in the left subclavian artery. The post-mortem examination disclosed its nature. The arch of the aorta, and the arterial branches, as far as the palmer arch, were removed by Mr. Hunt for examination. A coagulum extended for about three inches along the subclavian artery, occupying nearly the whole calibre of the vessel. It adhered strongly to the aorta near the opening of the vertebral artery which arose from the arch between the left carotid and the subclavian, but this coagulum could easily be separated from the subclavian, and was pointed at the distal extremity. The left vertebral artery was narrow at its commencement, and was closely filled with dark-coloured coagulum. Coagula also occupied at their commencement the circumflex, ulnar, radial, and interosseous arteries, beginning an inch or two above their origin, leaving free those parts of the vessels which were most distant from any important branch. The coats of the aorta, for a space of about an inch in diameter at its fore part, were thickened from atheromatous degeneration, which, under the microscope, exhibited fatty deposit in the circular fibres. In the centre of the diseased patch was a softened portion, half the size of a pea, consisting, as reported by Dr. Quain on a microscopical examination, of aggregated granule cells, fatty particles, and cholestrine, and surrounded by calcareous deposit to the extent of two or three lines; and to a part of the altered structure the coagulum was so strongly adherent that, when violently pulled, at a scientific society, a portion was left attached to the vessel. The heart was somewhat hypertrophied, but was in other respects perfectly healthy. The explanation which some might suggest of the origin of the coagulation—viz., the diseased condition of the aorta—is to me unsatisfactory, and appears to remove the difficulty only a step. As subsidiary circumstances, I cannot help attaching some importance to the peculiar situation of the origin of the vertebral artery, as calculated to disturb the equable current of blood through the aorta; and also to the condition of the orifice of that vessel, which seemed to me narrow beyond what could be accounted for by thickening of the arterial tunics; and it appears to be an illustration, in addition to others which have come under my observation, of an opinion that parts which present anatomical irregularities are prone to become by preference the seats of disease.

Malformation indicates defect in the direction of formative energy, and it is not surprising that such defect should entail susceptibility to diseased action. The nature of the connexion between the diseased condition of a portion of the aorta and the gangrene of the hand is a fair subject for speculation; but it must not be forgotten, in reference to this inquiry, that examples of extensive and seemingly spontaneous gangrene have occurred without any evidence of arterial disease.

A case of extensive gangrene of the extremities of a child, (described by Mr. Solly in the *Transactions* of the Royal Medico-Chirurgical Society, vol. xxiii., p. 237,) in which the bloodvessels were found free from disease, is in this respect well worthy of consideration.

You will wish to hear a few additional particulars regarding J. B——. She had lost four sisters and a brother from phthisis, but enjoyed good health till two years since, when she suffered from menorrhagia for thirteen weeks. The catamenia ceased a year since, when she became affected with cough, and began to lose flesh. Four months before her admission to the hospital, and on a few occasions subsequently, her expectoration was streaked with blood, but it consisted chiefly of green, consistent, viscid matter. Although only fifty-two years of age, she appeared more than sixty. Hair and irides grey; arcus senilis remarkably developed, especially on the right cornea; fingers clubbed; nails curved. She suffered occasionally from flatulent distention and from diarrhœa; this latter symptom was relieved by bismuth. She inhaled

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chlorine with relief to her cough, and for the same object also derived some advantage from lozenges, prepared according to the original formula of Sydenham :—Sugar-candy, two pounds and a half; boil in a sufficient quantity of pump water till it sticks to the end of the fingers; then add liquorice powder, elecampane, aniseed, angelica-seed, each half an ounce; orris powder, flowers of brimstone, each two drachms; essential oil of anise, two scruples; make lozenges according to art. These lozenges sometimes relieve, but cannot be expected to be so useful to the consumptive as Sydenham found them in catarrhal cough.

We will now proceed to consider a symptom very frequent in pulmonary consumption, and one which is apt to occasion considerable alarm in the minds of patients and their friends. I refer to *spitting of blood*. In proof of its frequency, I may mention that it has occurred in nineteen out of the twenty-six cases of confirmed phthisis at present under my care in the hospital—that is, in seventy-three per cent.; of the seven exceptions, five are in the first stage. This proportion is not very different from that which calculations on a larger scale supply; and when spitting of blood occurs, unconnected with disease of the heart, or mechanical injuries, or suppressed catamenia, it is perhaps the most significant of any single symptom of phthisis. You will observe that in the case of S. C. there is a murmur near the apex of the heart, accompanying, not superseding, the first sound, whence you conclude that there is mitral disease, not perhaps very considerable, but sufficient to occasion regurgitation into the left auricle, and we trace the disease to rheumatism. Hæmoptysis in this patient was preceded by a severe blow. We may fairly assume that in this case the hæmoptysis is probably unconnected with pulmonary disease; for, not to mention other reasons, rheumatic affections of the heart do not often co-exist with phthisis.

It is a popular opinion that "breaking a blood-vessel" often produces consumption, and even in medical writings you will sometimes find it implied that hæmoptysis often precedes phthisis. Is this opinion correct? Here is a table of the last twenty-four patients in whom I have observed hæmoptysis: it may assist your judgment on this question :—

Name.	Age.	Time of First Occurrence of Hæmoptysis.	Quantity Expectorated at once.	Total quantity Expectorated at successive times.	First Occurrence of Cough, &c.
W. H.	34	Five years since.	Six pints.	Ten pints.	Five years since.
J. W.	32	Eight months.	Four pints.	No recurrence.	Two years.
J. W.	42	Ten months	Three pints.	Six pints.	Twelve months.
W. R.	21	Twelve months.	Two pints.	No recurrence.	Ditto.
P. R.	23	Six months.	A pint and a half.	Ditto.	Ditto.
D. W.	53	Twenty-two months.	Ditto.	Ditto.	Twenty-two months.
J. B.	22	Six weeks.	Very copious, producing syncope.	Ditto.	Nine months.
H. B.	20	Six months.	Half an ounce.	Four ounces and a half	Thirteen months.
A. S.	37	Twelve months.	Half a pint.	Fourteen ounces.	Ditto.
G. S.	29	Ditto.	Five ounces.	No recurrence.	Three years.
M. A. B	16	Four months.	A drachm.	Ditto.	Some years.
G. M.	26	Seven weeks.	Half an ounce.	Ditto.	Fourteen weeks.
E. H.	38	E'even years.	Ten drachms.	Three pints and a half.	Twenty-three years.
E. D.	33	Four years.	Half an ounce.	An ounce.	Nine months.
W. S.	24	Nine weeks.	Ditto.	No recurrence.	Nine weeks.
G. J.	31	Six weeks.	Two drachms.	An ounce.	Ten months.
J. D.	36	Seven years.	Four ounces.	Sixteen ounces.	Twelve months.
E. F.	28	Two years.	Eight ounces.	No recurrence.	Two years.
J. W.	41	Fifteen years.	Uncertain.	Two ounces	Seven years.
A. J.	46	Fifteen months.	Two ounces.	Five ounces.	Three years.
H. K.	26	Twelve months.	Uncertain.	Two pints.	Twenty months.
W. B.	29	Two years.	Four ounces.	No recurrence.	Nine months.
W. H.	15	Nine months.	Two ounces.	Ditto	Ditto.
T. S.	24	Sixteen months.	Half an ounce.	An ounce.	Eighteen months.

In fourteen of the twenty-four, other symptoms, such as obstinate cough, loss of flesh or strength, or changes of respiratory sound, which could not be conveniently entered in the table, preceded the hæmoptysis. In six patients one or other of these symptoms, and the spitting of blood, were believed to commence together. In only four are we without evidence of the pre-existence of disturbed function. Even in these four it is highly probable that a careful examination, prior to the occurrence of the symptom in question, would have detected some change of respiration. Here is a young woman (M. W.) who has never had hæmoptysis, nor suppressed catamenia; her cough is only occasional, but her tongue is often loaded; there are fits of dyspepsia, with severe frontal headache, not referable to any peculiarities of diet. The catamenia are not interrupted. Her impaired health probably depends on tubercular cachexy: still, if she were not under medical observation, no circumstance would be recorded as indicative of phthisis. Listen to her breathing:—in the left subclavicular region the inspiratory murmur is interrupted,—the air seems to enter the corres-

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ponding portion of the lungs by a succession of waves, instead of in a continuous stream. This sign, as I may hereafter prove to you, when isolated, is not a proof of tubercular deposition, but it is a somewhat ominous symptom, especially when associated with other changes, such as prolonged expiratory murmur, which in this patient exists at the apex of the opposite lung. To my mind we have evidence of tubercular deposit, but as yet no hæmoptysis has occurred. As respects treatment, you will observe an issue under the left clavicle, produced by galvanism: plates of zinc and silver being connected together, and the zinc-plate moistened with a saline solution applied to the skin. Various alterative and tonic medicines having been used, with a view to relieve the headache and dyspepsia, with only temporary advantage, I determined to try the effect of a tablespoonful of yeast three times a day. This substance, originally introduced into medical use by a clergyman named Cartwright, has been considered useful in typhus. It often gives relief as a gargle to the sore-throat of scarlatina; and its remarkable power of separating sugar from its combinations, and altering its character, might lead us to anticipate its possessing properties competent to influence favourably the digestive process, and thus to interrupt the mal-assimilation by which tubercular conditions assail the blood. Some observations by my friend Mr. Sampson have contributed to make me hopeful in this respect, and this patient seems to have derived benefit from the medicine in question.

But to return to the subject of hæmoptysis. When this symptom is considerable, great alarm is generally experienced by the patients and their friends, and the danger of sudden death is supposed to be considerable. Is such an event common? By no means. In men it is very rare, and many practitioners in the course of many years have never witnessed such an event in woman. Such a catastrophe however, is possible; it occurred, for example, in the patient from whose lung Dr. Carswell took this delineation, which I exhibit to you, in which a large irregular ulcer in the left bronchus near the bifurcation of the trachea, effected a communication with the pulmonary artery.

There are two circumstances in reference to the circulation in phthisical lungs unfavourable to the occurrence of profuse hæmorrhage. In inflamed lung, the bloodvessels, though tortuous, are free, but in tubercular lungs the blood coagulates in the extremity of the vessels. But there is an additional point well worthy of your attention. When you look at this large vomica you observe a considerable band passing across it. Of what does this band consist? It contains no bronchial tube. Bronchial tubes readily ulcerate, and by that process expectoration from cavities is promoted. The band consists mainly of bloodvessels and cellular substance. Bloodvessels are inapt to ulcerate. The walls of the pulmonary arteries, when surrounded by tubercular ulcerations, instead of sharing the disorganization, usually thicken; by the deposition of fresh material, their calibre gradually lessens; after a time they cease to be pervious, they are filled with a thin, reddish, fibrinous plug, and transformed into solid cords.

It is probably only in those rare instances in which such a vessel is suddenly torn before the calibre is perfectly closed, that fatal hæmorrhage is at all likely to occur. The popular idea that all bleeding from the lungs is produced by ruptured bloodvessels, is a serious error. The ordinary cause of hæmoptysis is doubtless compression or obliteration of the pulmonary veins by the tubercular deposit; in consequence of which, blood, interrupted in its natural channels, overflows or exudes into the neighbouring bronchi. If this explanation be correct, hæmoptysis moderate in amount must be regarded rather as beneficial than alarming. By preventing the stagnation of unhealthy blood it must tend to oppose the extension of tubercular disease; and as far as a conclusion may be drawn from the cases under my care, the tendency of hæmoptysis of considerable amount would seem to have been rather favourable than otherwise. You will observe that some of the cases recorded in the table, of copious hæmoptysis, were remarkably slow in their progress. In six of the cases the quantity of blood expectorated at once has exceeded a pint, and the time which has elapsed since the occurrence of the profuse hæmoptysis has been, in these patients, respectively six months, twenty-two months, twelve months, ten months, eight months, and five years; in several of these instances, evidence of pulmonary disease preceded by many months the occurrence of hæmoptysis, and in some the disease has not advanced beyond the first stage. These facts are in harmony with my general experience, as showing that this symptom tends more to retard than to accelerate a fatal issue

The practical bearing of these facts is obvious and important, as impressing the conclusion that undue haste to arrest hæmoptysis should be deprecated, and that as a general rule it is better to moderate this symptom by producing determination to other organs, than to employ direct astringents. You will find great benefit in many cases from the administration of a dose of calomel or mercurial pill, with henbane, followed by the use of half-drachm doses of sulphate of magnesia with diluted sulphuric acid, administered twice a-day.

This plan has been adopted with a young woman now in the hospital, whose case I will briefly relate.

E. B., aged sixteen, of sanguineous temperament, and who has lost her mother, an uncle, and two maternal aunts, from phthisis, was admitted on the 26th of December, 1850. Has been subject to pain of chest for ten months, and to cough for fourteen weeks. This cough was at first dry, but latterly accompanied with expectoration. She has been for four years affected with leucorrhœa. Catamenia, which commenced fifteen months since, at first profuse for seven months, subsequently irregular, and for the last four months suppressed. Has pain under the left mamma;

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general appearance delicate, but not very unhealthy.

A fortnight before admission, on awaking in the morning, she found the blood flowing from her mouth, and the bedclothes largely soaked with it. She estimates the quantity at a pint. The flow stopped half an hour after she awoke, but has recurred every night since. She thinks she brought up three or four pints altogether—a pint the first night, and about three ounces every night since.

In the day-time the sputa are not even streaked with blood. Her tongue is furred; appetite bad; bowels much confined; urine thick and scanty—ten ounces in twenty-four hours, specific gravity, 1037; cough of most distressing character; sometimes twenty-two fits in ten minutes. Sleeps very badly half an hour at a time, and is then awoke by coughing. *Physical signs:* slight dulness and imperfect inspiration on right side; prolonged expiratory murmur on both. For a day or two she was treated with sulphuric acid and opium, but on Dec. 28th, the pulse being 135, respiration 48, digitalis and hydrocyanic acid were given.

Dec. 29th.—Pain in the left side relieved by dry cupping, but the hæmoptysis continuing, alum was added to her mixture.

30th.—Hæmoptysis during the night amounted to four ounces. Half a grain of tartarized antimony; five and a half ounces of water; half an ounce of syrup of poppies. An ounce of this mixture every four hours. A small blister on each side of the dorsal spine; six leeches to the vulva.

31st.—Leeches bled freely; hæmoptysis last night only an ounce; incessantly vomiting; chloroform to be applied to check the vomiting. Three grains of calomel; five grains of extract of henbane; in two pills, immediately. A drachm of sulphate of magnesia; an ounce of rose-water; ten minims of diluted sulphuric acid; three minims of diluted hydrocyanic acid; every four hours.

Jan. 3rd.—Hæmoptysis gradually lessening.

On the 6th of January inhalation of turpentine was tried daily, and on the 8th, the same remedy internally, in doses of fifteen minims; under this plan, the spitting of blood was much subdued, but returned in a few days; and in consideration of the interruption of the catamenia for seven months, tincture of lytta, in half-drachm doses, was administered with decided advantage.

This case is in various ways instructive. It shows you how even such a symptom as hæmoptysis may be modified, when associated with hysteria, and may indeed partake of the capriciousness of the hysterical condition. It serves also to confirm the statement that considerable expectoration of blood may exist without any serious consequences, and with relief rather than aggravation of the associated pulmonary disorder.

A. C——, another patient whom you have seen, has had hæmoptysis removed by the use of turpentine, the inhalation of which has also materially diminished the quantity of expectoration.

Let me repeat, that hæmoptysis, when slight, is often useful and should not be hastily checked. When it is considerable, if of an active character, as indicated by full, hard pulse, heat and oppression under the sternum, and heaving of the diaphragm, cupping, or even bleeding, may be requisite. In less formidable attacks, anti-congestive remedies, and small doses of sulphate of magnesia with sulphuric acid, may be given, or antimony with nitrate of potash. Ipecacuanha has been recommended, in doses of two grains every quarter of an hour, but this remedy has disappointed me. If the hæmoptysis be passive, direct astringents may be required, of which alum is one of the best; and perhaps this remedy acts more efficiently when allowed to dissolve in the mouth than when taken in mixture. The following prescription is appropriate for this purpose: Take of powdered gum-arabic and of white sugar, each three drachms; powdered tragacanth, a drachm and a half; alum, two drachms; catechu, three drachms; rose-water, as much as sufficient for a mass to be formed into sixty lozenges.

The most powerful of direct astringents in the treatment of urgent cases, is acetate of lead. You may give two grains for a dose in a mixture, with half a drachm of distilled vinegar; or if you give it in pill, take care to give acetic acid immediately afterwards, in order to counteract the tendency of the carbonate of lead to produce colic. Gallic acid is not so prompt and effectual as acetate of lead, but suits some cases remarkably well. Turpentine is probably one of the most certain and suitable remedies in a majority of instances. Two drachms of spirits of turpentine, two ounces of mixture of gum-arabic, and four ounces of infusion of matico or of cinnamon water, with thirty minims of tincture of capsicum, form an appropriate mixture, of which an ounce may be given at intervals. In slight cases the infusion of matico alone is often sufficient.

When the hæmoptysis is associated with suppressed catamenia and hysterical symptoms, lytta is of great value; but let me repeat the opinion, that in a majority of instances of phthisis moderate expectoration of blood is useful, and that whilst you allay the apprehensions of the patient you may leave the symptom to its own course.

THE HUNTERIAN MUSEUM.—In the parliamentary grants of money to medical institutions and charities, voted by the House of Commons, on the 19th inst., will be found one of £15,000 towards the erection of an additional museum, and for enlarging the theatre of the Royal College of Surgeons, for the delivery of the Hunterian Lectures. The vote for this munificent sum was agreed to by the House without a division, the Chancellor of the Exchequer stating, that many years ago Mr. John Hunter, the most celebrated surgeon, perhaps, which this country ever produced, accumulated a collection of anatomical specimens of great value, which eventually became so extensive and valuable, that they were bought by the country, and ultimately committed to the care of the College of Surgeons. Since that museum had been committed to their care, the College of Surgeons has most faithfully discharged the trust reposed in them. They had themselves greatly added to the museum, at a cost of no less than £189,000, and thrown it open to the public.

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CLINICAL LECTURE

Delivered at St. George's Hospital,

BY CÆSAR HAWKINS, Esq.,

SURGEON TO THE HOSPITAL,
AND VICE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

[*Continued from July No.*]

1. *Caries of sternum; abscess in axilla.*—2. *Acute abscess of mediastinum; separation of bones of sternum.*—3. *Caries of sternum; abscess of mediastinum, from injury.*—4. *Caries of sternum, resembling aneurism; abscess in chest; pleurisy; hydrothorax.*—5. *Caries and necrosis of ribs.*—6. *Necrosis of ribs; abscess in chest; operation.*—7. *Empyema; exposure of ribs.*

GENTLEMEN,—Having brought under your notice, in the last lecture, the subject of caries and necrosis of the cranial bones, I propose now to describe to you some cases which will illustrate that of caries and necrosis of the sternum and ribs, the diseases of these bones being interesting and important for the same reason as with the cranium; I mean, the liability in these parts, that the progress of the disease should implicate the organs and textures within the chest, just as the other affect the brain. There are several cases now in the hospital, which will serve to form a series of the consequences of disease of these bones.

Caries of the sternum and ribs, as of the cranium or other bones, may rise spontaneously or from injury; from morbid constitutional states, as syphilis or scrofula; the ulceration of the bones may be simple, or unhealthy and phagedænic, and may or may not be followed by necrosis of any portion of the bone; or, necrosis having taken place, it may sometimes be accompanied by caries, and at other times by healthy ulceration; finally, as in the cranium, the disease is very tedious, and is to be treated through the constitution, rather than by surgical interference, in the majority of cases.

1. John Thomas, thirty years of age, was admitted, on the 5th of February, under Dr. Nairne; but I was requested to take charge of him, on the following day, as a cough he complained of did not seem to arise from disease of the lungs. Three months ago he had a severe attack of shivering, and the next day he says he had numbness and partial loss of motion of the left arm; a few days afterwards he perceived a swelling in the axilla, without much pain, which continued to increase, and extended under the pectoral muscle to the sternum. About three weeks afterwards the abscess broke, and discharged largely, and had, on his admission, two small openings in the axilla, with a large swelling under the pectoral muscle; besides this, however, he had a small pointing of matter on the left side of the sternum, about its upper third. He was thin, pale, and emaciated, and suffering from feverish irritation, with a quick, weak pulse, and a little cough. A little wine had been ordered him, which I continued, with meat diet; I enlarged the opening in the axilla, so as to prevent the confinement of pus, and opened also the abscess over the sternum, from which a little thick matter escaped, and then I found that a probe passed a little way into the substance of the bone, which was soft and carious.

I am inclined to believe, that in this case the disease of the sternum was the orginal cause of his illness, though he had not observed it, and that in consequence of this the matter had made its way beneath the pectoral muscle; for the ligamentous tissue covering the periosteum, where the pectoral muscle arises, is not always disposed to ulcerate, and readily allows matter to burrow; and in the loose cellular tissue below the muscle, it would naturally pass towards the axilla; or it may be that glandular inflammation followed the disease of the sternum, and an acute abscess around the gland, with the rigor he describes, and long-continued fever afterwards; at all events, matter primarily formed in the axilla could not give origin to caries of the sternum. We found that the loss of power in the arm which he spoke of was nothing more than the stiffness and pain in moving the arm, from the inflammation about the pectoral muscles. He was relieved by the openings I made on the 7th; but on the 14th, there came on some erysipelatous redness round the abscess of the sternum, with little disturbance of the system; the next day it had spread to the axilla and on the abdomen; and to-day (the 18th) much of the back and front of the body is covered with erysipelas of a low character; his pulse yesterday was very quick and irritable, and he seemed very low and depressed, with a little more cough. I will not speak further of his erysipelas, however, except to observe that his state is just that in which secondary abscesses are likely to occur.

The disease in the sternum appears then, in this case, to have arisen without evident cause, and is perhaps confined to the outer part of the bone, and affects a small part only; it seems only to produce external effects, unless his cough has also been produced by it.*

2. In the next case I will describe to you, the attack was much more sudden and acute, and the disease extended through the whole thickness of the bone. A young woman, twenty years of age, was admitted under my care on the 7th of April, 1847, with scrofulous lupus of the nose and face, which had existed for three years. This was beginning to get better, when, on the 17th, she was attacked with erysipelas of the face, with some fever, which subsided in a few days, and had the effect, as you have seen in a lad now in the hospital, of completely healing the lupus for a time. On the 21st, however, it is stated in the notes that she had a cough, without expectoration, which on the 24th is said to have been better, but on the 25th had increased again, with difficulty of breathing, and pain in the centre of the chest, increased by inspiration. She was weak and feverish, and perspired a good deal, with a pulse of 112. On the 30th, the chest symptoms were improved, but I

* This man was re-admitted a few weeks afterwards for erysipelas of the face, but the sternum continued sound.

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perceived an abscess over the sternum, where the skin had been affected by the erysipelas, to which, therefore, before puncturing it, the abscess seemed to be attributable. On opening it, however, some thin bloody pus with flakes of lymph escaped, in greater quantity than the apparent size of the abscess; and on examination of the part, the probe passed completely through the sternum into the mediastinum. In short, there was suppuration on both sides of the affected bone, just as you may see in the head, though not enough in the mediastinum to make an impulse visible on coughing; this abscess gave origin to the cough and pain,—which was not exactly like ordinary inflammation of the lung or pleura.

On May 2nd the cough was increased, with slight yellow mucous expectoration; the breathing was hurried, and was performed more easily in the upright than in a recumbent position; and her pulse was 144; but she had now no pain on coughing, except in the situation of the abscess. The next day she was better, her pulse 100 only, and she had less cough; the two upper bones of the sternum, the manubrium and gladiolus, were found to move so freely as distinctly to crepitate, the whole union between them being destroyed. From this time she gradually got better. On June 4th the abscess had quite healed, but re-opened, so that a small sinus still led to the bone, but without apparent likelihood of exfoliation, and probably it soon healed.

3. The next case for your observation derived its origin from an injury; it is that of John Johnson, forty eight years of age, admitted into Radcliffe ward, on Feb. 5, who had had several abscesses, at different times, in several parts of his body, which are now well, but which show that his constitution is not a very good one. Seven months ago, he received a blow on the middle of the sternum from an anchor, which might have broken the bone, or dislocated the cartilage of a rib, but of this there is no evidence. The part began to swell, and continued to increase till a fortnight ago, when it broke, and the small orifice was the next day enlarged. He had had a cough for a month before this, but on admission his respiration was free and natural, with the exception of some bronchitis. There was no illness before the opening of the abscess, but directly afterwards he had shivering and copious perspirations, which continued for several days, and when admitted he was thin and weak, with an anxious expression from the illness he had experienced ever since. There was, on his admission, a round opening, an inch in diameter, over the centre of the sternum, with thick and purple edges, and condensation of the periosteum and soft parts around the abscess, by which the skin was undermined to some little distance; the bone was covered by periosteum, thickened, and with a white slough on it, and it is found that the probe does not at present touch the bone, (though I dare say some little perforation of the periosteum will be discovered by-and-by,) but it passes on the left side of the bone, as if between the side and the cartilage of the rib, the surface being exposed, but whether dead or carious remains to be proved.

In this case, then, as in the last, there is suppuration within the chest, and you perceive in his history the effects of exposure of an unhealthy collection of pus to the air, in the sudden accession of severe fever and inflammation, which took place to a less degree in the last case, and is contrasted with the immediate relief which the opening of a more healthy abscess produces, as in Thomas. Under the use of quinine and good living, Johnson has already a good deal improved in feelings and strength, and his cough is less; but the result is doubtful, and well deserving of your attention while he is under our care.*

4. It remains for me to bring one more case under your notice, which occurred some time ago, and shows you the still more extensive mischief which disease of the sternum may occasion, as well as one or two other points in the history of such cases.

A man, forty years of age, was admitted under my care, April 7, 1848, so that some of you may perhaps remember his case. He had a tense swelling over the whole of the left side of the sternum, and some fluid could be felt at the upper and lower part of it, the intervening part being hard and inelastic; it presented no thrill, only the heart's sound, and it had been observed a month. He had not been living well before his admission, and had never had good health since he returned from the West Indies, nine years since: he served twelve years in the army.

Here then are two circumstances for your notice. You observe that the notes contain an observation that there was no thrill perceptible in the swelling, which was under the periosteum and ligaments of the sternum, and without discoloration of the skin. The fact is, that the disease resembles those cases in which an aneurism of the aorta makes its way by absorption through the sternum, and therefore you should carefully examine any swelling in this part before puncturing it. I understand that in Johnson's chronic abscess attention was drawn to the same circumstance,—a slowly-formed swelling with hard margins, and dark purple skin, resembling a later stage of an aneurismal swelling, when it has reached the skin and is on the point of bursting.

A second circumstance to be noted is the double pointing of the matter, which arises from the very dense fibrous and ligamentous tissue covering the sternum; it does not easily ulcerate; matter burrows beneath it to a thinner part, and therefore it often happens that several different orifices lead obliquely to the same carious part, as sinuses, unless you are able to make a free opening near the seat of the disease.

As the skin was uninflamed in this man, M'Donald, I thought I would try if the fluid could be absorbed by a blister; and the notes say that on the 17th there was not so much swelling, and

* This patient left the hospital very much improved, but before the communication with the mediastinum was entirely cured, two openings through the sternum having been found.

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much less fluid; and after a second blister, the same note occurs on the 23rd,—swelling and fluid less. But on this date, the notes speak of a cold, and pains in his limbs, and now the fluid doubtless became more purulent, and in such a state no longer admits of absorption. The cold, however, was an attack of pleurisy, for which Dr. Nairne prescribed leeches, a blister, and calomel and opium.

On the 28th, the abscess was larger, and I opened it, the pleurisy being nearly gone, but some cough remaining. On May 2nd, matter was obliged to be let out at the other prominence of its extent, about five ounces escaping; the hard tissues I alluded to preventing the escape of the matter between the two ends of the abscess.

On the 9th we find this note:—"Says he is much better; cough and pain in the chest much less; a probe was passed by Mr. Hawkins two inches in perpendicularly to the surface of the chest, which shows that the abscess evidently communicates with the anterior mediastinum." And no doubt this was the case, as in Johnson's case, and probably the cough and pleurisy arose also, as Johnson's fever did, not from cold, but from inflammation of this internal abscess—just as inflammation of the brain takes place when matter is confined under the cranium. Under better diet, and ammonia with gentian, his health improved till the 26th, when we find that he complained much more of cough, and expectorated a great quantity of viscid, muco-purulent matter; on the 29th he had more pain in his side, and felt weaker; and on June 1st it is stated, "the cough is not quite so troublesome, but he complains of being unable to lie on the right side; there is great fulness of the chest on the left side, and dulness on percussion, wherever the part is most dependent, leaving no doubt of there being effusion of some fluid into the cavity of the left pleura, the lower half of the chest being enlarged, and the intercostal spaces obliterated." A blister, some wine and morphia, and acetate of ammonia mixture, enabled the note on the fifth to say, that the cough was less troublesome, the intercostal spaces somewhat depressed, and respiration heard lower down in the chest. On the 7th, there was again more pain and fulness of the side, one of the openings over the sternum had ceased discharging, and I was obliged to make a third opening on the the 9th in a different part. After this he was relieved; the abscesses became quiet. At the beginning of July the diminution of size and of dulness on percussion showed that the fluid was being absorbed, and at the end of the month the discharge was nearly serous, and not always observed, and he left the hospital, apparently nearly well, and perhaps without any exfoliation whatever.

In this case, then, there was not only inflammation of the cellular tissue in the chest, and of the lungs, in consequence of the abscess in the mediastinum, but a large collection of water in the pleura. You will not understand by the increase of fluid in the pleura at the same time that the abscess discharged less freely, that the fluid in the pleura communicated with the abscess; I only mean that the abscess in contact with the pleura had inflamed this membrane, and occasioned that serous or semi-purulent liquid which is capable of absorption, and which in this patient left a very useful lung afterwards.

Such cases of caries of the sternum as I have thus passed in review before you, do not require much to be done locally; portions of bone very seldom die, so as to require any surgical interference for their removal. The caries appears sometimes to leave a permanent opening through the bone, which is smoothed off in time. I have on some occasions scraped away some of the carious bone with a chisel, but I do not know that much was gained by it. In one instance of internal abscess, there was so much distress that I contemplated enlarging the small orifice which existed, by means of a small trephine, but it soon became unnecessary. The great point in the local treatment is to let the opening by which the matter escapes through the sternum, remain as free and direct as possible, and for this purpose I expect to have to enlarge the opening in Johnson, by cutting through the undermined skin, towards the inner orifice. [This has since been done.] Common lotions, acid or caustic, or others, may be applied to the carious parts of the bone, which generally heal up in time, though slowly; it is chiefly through the medical remedies improving the general system, that a cure is finally effected, and they are of the same nature as I spoke to you of in the last lecture.

5. Caries and necrosis of the ribs necessarily resemble, in some respects, the similar diseases of the sternum, and of its simplest form you have an example in Joseph Knuckley, thirty-four years of age, in Grosvenor ward, who was admitted on the 8th of January, with a small opening in a cicatrix of larger size, a little below the centre of the chest, leading obliquely on the left side to the seventh or eighth rib; just below the left nipple was a second opening, the sinus leading apparently to the same rib, as if the upper and lower parts of the rib were touched by the probe in the two sinuses; and the bone appeared to be carious where it was exposed. The soft parts between were thickened, so that the left side measured a little more than the healthy side of the chest. Respiration however was quite clear both anteriorly and posteriorly, so that it appeared as if the disease was confined to the bone and parietes of the chest. He was somewhat pale, but not in bad health. A small abscess formed in the first-mentioned place, in Sept. 1849, and the second in August, 1850, and have remained open ever since. He has lately been discharged from the army.

The origin of this affection appears then to have been from some fault of the system, and it may perhaps have been from former syphilis, for he has since complained of some pains, which he calls rheumatic, in the limbs, and on examining the tibiæ they both appear enlarged and irregular from deposit of new bone, the consequence of

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chronic inflammation of the surface, and perhaps of the inside of the bone.

He was first put upon the use of bark and acid, and latterly of sarsaparilla and iodide of potassium, and is a good deal improved in health. With regard to local measures, I have been obliged once to enlarge one of the sinuses slightly, and some nitric-acid lotion has been injected into them; the part is less swelled, but it does not appear that any bone requires to be removed, and it is probable that it will be long before the bone becomes sufficiently healthy to allow the sinuses to close.*

6. But in the next place let us notice the further progress of caries or necrosis of a rib, when the affection produces internal mischief corresponding to what we have already seen regarding the sternum; the first of which is a circumscribed empyema, but on the outside of the pleura instead of within its cavity, as in ordinary inflammation of this membrane.

A boy, fourteen years of age, was admitted into the hospital under my care, Sept. 30th, with a fluctuating swelling about the size of half a large orange, situated over the angles of the ninth, tenth, and eleventh ribs on the right side, and nearly reaching the spine, the upper end of the swelling being near the inferior angle of the scapula, and there was also some general tumefaction of the soft parts in the neighbourhood. There was slight lateral curvature of the spine, the convexity being towards the left side; that is to say, the pain of the disease had made him lean towards the affected side. The swelling was first noticed a fortnight previously, and was then of nearly the same size as at present, but he had felt occasional pain in the seat of the swelling, and general uneasiness of the whole side, for a year. He had been accustomed to carry weights on his head as an errand-boy, which used to give him pain. The respiration was heard very near the swelling, was natural, and was nearly alike on the two sides of the chest; he had no cough; percussion elicited a normal sound, except for a little distance around the swelling, where it was dull; his health did not appear bad, though he was pale, as if of weak habit. The swelling could not be pressed into the chest, nor was there any impulse well marked on coughing.

From these circumstances it was evident that the swelling was not an abscess of the lung, or empyema making its way externally, and yet from the dulness on percussion, there was evidently some fluid within the ribs, as well as external to them; in other words, that there was a circumscribed empyema external to the pleura, originating most probably in disease of the ribs.

Such collections of fluid will occasionally remain quiet for a long time, while disease stops short of actual caries or necrosis; and if in this condition, as with abscesses of the spine or of the sternum, it is better not to meddle with them, for fear of that severe and dangerous inflammation which we have seen, in Johnson, immediately following the opening of the abscess. A young gentleman has been under my observation for nearly four years, with a collection of fluid, of course not complete pus, of the size of half an orange, at the bottom of which are felt two or three solid masses, like cartilage, attached to one of the ribs; the size of this has not varied much, and it only once gave some pain and inconvenience; but I feel assured, from his very delicate constitution, that an opening made into it might easily have given rise to fatal inflammation and fever.

Of course, however, if an abscess is increasing or occasions any constitutional effects, it must be opened; and this seemed to be the case in this boy, for he had a slight shivering four days after his admission, and therefore on the following day, when I saw him, I opened the abscess. The note of the next day, Oct. 7th, remarks that the skin around the opening was very tender. On the 8th the discharge was thin and ichorous; and on the 9th he was feverish and hot, and had been sick in the night;—that is to say, the sac of the abscess inflamed, beginning perhaps with the rigor, before the puncture, and increasing for three days till actual fever was present. It is stated also on the 7th, that on coughing, some bubbles of air escaped from the wound; a circumstance which in abscesses about the chest is sometimes of importance, as indicative of communication with the lung; but in this case the air had no doubt previously been drawn into the abscess in inspiration, as it often is, and may increase a tendency to inflammation in any cavity into which it enters.

The fever quietly subsided, and on the 18th there was very little tenderness over the abscess; it was observed that the discharge was increased when he coughed, showing that the inner wall of the abscess, lining the rib, was thin enough to receive an impulse in expiration. This internal cavity contracted, so that on the 31st it is stated that the dulness on percussion was not so extensive, and he left the hospital Nov. 12th, with the rib exposed and dead, but not loose.

In the following January I re-admitted him, for the purpose of removing the dead bone, which was supposed to be loose, and on the 22nd I cut through the latissimus dorsi down to the bone, and found that the caries of the bone had completely divided it across, both ends of the bone being dead to a small extent. These I cut off with a pair of bone forceps, and dressed the wound with lint, to prevent any confinement of matter beneath the divided muscle. No bad effects followed this operation, but I do not know that it did much good, for on Feb. 9th, the wound having contracted, so as to be again nearly a sinus, one end of the cut bone being exposed, I broke off a piece apparently dead, but found it soft and carious, so that the new ends of the bone now left were not free from the same unhealthy ulceration, and discharge was still going on when he again left the hospital, on Feb. 18th.

The deceptive feeling I have just alluded to, is not uncommon in necrosis of the ribs, the motion of this bone at its two ends being so free, that

* A piece of bone subsequently exfoliated, and some necrosis still remained, the man going into the country in May, very much improved in his health.

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when the probe is pressed against the dead bone at the bottom of a sinus, it appears from its free movements to be quite detached, while in reality the whole bone has been moved. You will more frequently be called on to remove necrosed portions of a rib, than of the sternum, especially when the necrosis is the result of injury, or follows an acute abscess; and in doing it you must remember the necessity for some caution, lest you open the cavity of the pleura. This membrane is of course quite separated from the bone where it is actually dead through its whole thickness, so that it may be cut across with impunity, but it is in contact with the bone close to each end, being somewhat thickened at the point of junction; so that if you endeavour to divide the bone quite beyond where it is diseased, too much attention to this circumstance may lead you into the greater mischief of wounding the pleural lining of the chest.

It is of little use, however, operating on a rib when it is merely carious and not dead; the state of system, which originally caused the unhealthy ulcer of the bone, may remain still in action, as in this boy; and therefore, if you cannot cure the original disease by your internal remedies, and by keeping the sinuses free from confinement of pus, without an operation, you will very likely be disappointed by finding the disease again coming on after you have endeavoured to cut away the diseased part.

But this is not all. You have seen that caries of the sternum occasioned in one patient whose case I have related to you, acute pleurisy, and pneumonia in several others; it is no wounder, therefore, that the irritation of carious ribs should occasion some affections of the same parts, particularly as the patients are of necessity of weak constitutions, in whom phthisis is likely to be developed, if there is a tendency to it. Such was probably the result in the lad whose case I have last brought under your notice, for his mother brought him to see me some months afterwards, with a larger abscess than before, within the ribs, and with all the appearance of fatal disease of the lung in an advanced stage, but she was unwilling to let him come into the hospital with the expectation of his shortly dying.

7. But finally, it is not only from injury or disease, commencing in the ribs themselves, that they become carious or necrosed; suppuration within the chest may also affect them in the passage of the matter outwards; coming in contact with the bone, the periosteum is inflamed, and ulcerates; and the rib, so exposed, may ulcerate and die.

Of this you have a very interesting example in the case of Mary M'Donald, seventeen years of age, who was admitted with empyema on Dec. 11th. It appears that in the month of June last she first experienced pain in the left side, in the same part where a swelling subsequently formed, with difficulty of breathing, for which leeches were applied, and she soon recovered. In the following August, a small swelling appeared, which increased in size; and in about a month from its commencement it was opened, when of the size of an apple, but not less than a quart of matter, tinged with blood, escaped. It is evident, therefore, that the chief collection was within the chest, and hence she had felt much pain and difficulty in breathing while it collected, and could not lie on the opposite side, nor retain food on her stomach.

When admitted, two small openings led down to the seventh or eighth rib, which felt to the probe as if only exposed, and not carious or dead; healthy pus was escaping from the opening, the exit of which is increased by coughing, from the pressure of the parts around the abscess, and is facilitated by her lying, as she was directed to do, on the affected side, which assists the gravitation of the fluid; her heart was at the same time pushed far across into the right side, so that it could not be felt under the sternum; she breathed hurriedly, with some pain; and of course respiration was only audible in the upper and back part of this side of the chest; she was weak and pale, with rapid pulse, and emaciation. Whether the lung is only compressed by the fluid, or there is some development of phthisis, I will not now discuss

She has sufficiently improved in health to make recovery not improbable, and it must have been interesting to you to watch the gradual return of the heart to its proper place, so that it can be felt under the sternum, and even a little to the left side, as it ought to be, showing that she is fortunate enough not to have had the pleura, as is generally the case, so thickened as to prevent the expansion of the lung to a certain degree, with return of the mediastinum and heart. At the same time, however, you may have observed that the diminution of the suppurating cavity in the pleura is partly effected by the drawing in of the ribs, so that the affected side, which on her admission was larger than the sound side, will by-and-bye become much the least of the two, and that of course in proportion to the degree in which the lung is bound down and prevented from acting.*

In this case, then, the rib was exposed, but promises to require no surgical interference. In other cases, however, of the same kind, the exposed bone may become much diseased. A man came under my care four years ago, who had no less than three distinct openings in different situations into the pleural cavity, and a very considerable part of two ribs was dead, for two inches in length at least, which some one had wished to extract before his admission. His state of health, however, was not such as to make me perform this operation at that time, and probably the condition of the lungs has been followed by a fatal result since he left the hospital.

I have endeavoured, then, by this series of cases, to present to you a kind of consecutive history of the cases of diseased sternum and ribs which you may meet with, their progress being, I think, attended with a good deal of interest and importance.

* The cavity is now (June 7,) contracting slowly, and the patient improving.

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ON THE PHYSIOLOGY AND PATHOLOGY OF THE PHOSPHATE AND OXALATE OF LIME, AND THEIR RELATION TO THE FORMATION OF CELLS.

By William Beneke, M.D.,
Resident-physician at the German Hospital, Dalston.
(*Continued from July No., p. 23.*)

Part II.

Having alluded to the principal facts which afforded a proof of the relation of the phosphate of lime to the formation of cells, in my first communication, there is one point which I have now to insist upon.

It, namely, being a fact, that we are enabled to increase the formation of cells in diseases which evidently show a want of formation of cells, by the administration of phosphate of lime, we must suppose that there exists a want of the latter in individuals who are afflicted with those diseases; and so arises the question—whether it be true, that in diseases which I have shown to be most beneficially influenced by the administration of phosphate of lime, that the phosphate is present in the system in a smaller quantity than it ought to be in the normal state?

With respect to this question, we have first to complain of the impossibility of directly determining the quantity of phosphate of lime which is present in the body. Every one who has directed his attention to the quality of the bones in different skeletons will be acquainted with the great differences of their consistence; however, we are unable to determine or even to estimate these differences during life. One might suppose, perhaps, that the above question could be solved by accurate analysis of the blood; this supposition, however, is also entirely wrong. The blood which is drawn from the veins or arteries does not show the proportion of the materials brought into the system as food; it does not only contain those materials which are necessary for the formation of new substance, but it also contains many parts which result from the wear and tear of tissues and organs, so as to form a compound mixture of nutritious and excrementitious substances. We ought, therefore, to be as careful as possible in making up our results from those analyses. We are very well aware of the increase of fibrin in the blood in cases of acute rheumatism, pneumonia, and other inflammatory diseases, but we have not yet arrived at a certain determination, whether this increase of fibrin is owing to an increased quantity of albuminous substances taken as food, or to an increased resorption of the fluid which penetrates the cellular tissue of the various organs, and the single constituents of which partly originate from chemical changes of the tissues themselves. And still greater is our uncertainty in judging of the origin of the phosphate of lime which is found in the blood. It is not difficult at all to determine the quantity of phosphate of lime contained in a certain quantity of blood; but what conclusions can be drawn from such an analysis? On the one hand the phosphates are brought into the system with the food taken, on the other they originate from the wear and tear of the bones and the muscular tissue; one part of them is concerned in the formation of new substance, and her part is thrown out of the system by the kidneys and the bowels. Supposing now the wear and tear of bones to be abnormally increased, an abnormal quantity of phosphates will consequently re-enter into the composition of the blood, and by analysing the latter we shall find an increased quantity of phosphates in it. The general waste of bones is therefore leading to an increase of the phosphates in the blood, and nothing really would be more erroneous, than to suppose the general quantity of phosphates in the system to be increased, whenever we find their quantity increased in the blood. We cannot therefore avail ourselves of the analysis of blood in order to solve the above question: but there is another way which will enable us to do so, and this way is afforded by continued analysis of the urine and the fæces. Thereby we shall know what quantity of phosphates is thrown out of the system, and by comparing this quantity with the average quantity of phosphates taken with the food, we shall be very well enabled to judge of a general increase or decrease of the earthy phosphates in the system. However, as it is very likely that the greatest part of the phosphates contained in the excretions of the bowels originate directly from the ingesta, and as it is certain, on the contrary, that the greatest part of the earthy phosphates contained in the urine originate from the wear and tear of the tissues and bones of the system, I have in the first place only directed my attention to the latter, and I have found the analysis of the urine to give a satisfactory answer to the question proposed. It is clear that if in the normal state from six to eight grains of phosphate of lime are eliminated from the economy in twenty-four hours, an elimination of from thirty to forty grains must indicate a general loss of bony substance; and from the quantities of phosphate of lime found in the urine, we may approximatively determine whether such a loss takes place or not. I do not myself consider the analysis of the urine alone sufficient for a complete solution of the above question; such a solution absolutely requires also analyses of the fæces and ingesta; however it will be seen that, to begin with, those analyses of the urine are sufficient, and that they indicate the way which we have to apply to in our future inquiries. Thus, then, instead of the above question, the question that arises is, whether in those diseases which I have shown to be most beneficially influenced by the administration of phosphate of lime, the earthy phosphates are eliminated from the system by the urine in a larger quantity than in the normal state? whether different quantities of phosphates are excreted in different diseases generally? and what quantities these are?

I am happy to state that I have succeeded in answering this question satisfactorily; and it really afforded me great pleasure to see the results of the analysis of the urine agreeing in the most remarkable manner with my former observations. I have found that in all chronic diseases which are distinguished by wasting, emaciation, ulcerations of the skin and of the bowels, &c., (such as scrofula, especially rickets, &c.,) a much larger quantity of phosphates is removed from the economy by the urine, than ought to be in the normal state; and even such quantities as one never would have imagined, without entering into these examinations.

Previously, however, I have to say a few words on the mode of examining the urine which I adopted. As in other examinations of this kind, I here also only endeavoured to obtain approximate results, which I believe to be sufficient for general deductions. It seems to me quite indifferent, indeed, whether we know that a man's urine which is passed during twenty-four hours, contains ten grains or whether it contains eleven grains of phosphates; if our mode of analysis is sufficient to show whether a given quantity of urine contains ten, fifteen, twenty, thirty, fifty, or more grains of phosphates, I think this mode affords a way by which we may arrive at positive results. First, I believe it ought to be our only object to obtain such general and positive facts, upon which we can base our physiological and pathological views; and having become acquainted with these positive general facts, we may enter upon the more accurate examination, though in many cases we shall hardly gain anything else thereby, than

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a quantity of numbers, more positive and accurate than could be obtained in the other way; we shall gain other numbers, but no other views. In this way I then proceeded with respect to the phosphates of the urine; and the following was the mode of examination which I employed.

It is well known that the phosphates of lime, as well as of magnesia, are held in solution in the urine by its acidity, and directly precipitate when the urine becomes alkalescent by the addition of alkalies, or ammoniacal by putrescence. This precipitation of the phosphates becomes much more complete when the urine is heated or boiled, and by the addition of a solution of soda to boiling urine we may precipitate the whole quantity of phosphates present. Supposing now we put a small quantity of urine (about two drachms) into a test-tube, boil it, and add a few drops of a solution of pure carbonate of soda, so as to make the urine alkalescent, and directly we shall perceive whether a small or a large quantity of phosphates is present. By always making use of the same solution of soda (I used a solution of one ounce of dry carbonate of soda in twelve ounces of distilled water,) and of the same sort of test-tubes, we shall farther observe, that by the precipitation of the phosphates, certain and distinct degrees of turbidity are produced in this way in different sorts of urine, and even these degrees are so well marked, and so easily distinguished one from another, that I have considered this way sufficient in order to judge of the quantity of phosphates present in any urine. I therefore marked these various degrees of turbidity by numbers, and so exhibited for myself seven various types, on which I founded my observations. By No. 0, I marked a sort of urine which did not show the least turbidity by the addition of soda when boiled; by No. ½ a sort which became opalescent by the same means; by No. 1, a sort of urine which became opalescent in a higher degree, but so as still to admit of the recognition of objects behind the test-tube, as, for instance, the bars of the window, &c.; by No 1½ a sort which exhibited an opalescence of such a degree that it was impossible to see through it, or to recognise any object behind it; by No. 2, a sort which became quite turbid by the addition of soda, when boiled; by No 2½, a sort from which, after a few seconds, proceeded a precipitation of phosphates, when treated in the same way; by No. 3, a sort which directly yielded a precipitation by the addition of soda; and lastly, by No. 4, a sort of urine from which the greatest possible amount of phosphates was precipitated. These numbers, and these significations of them, soon became so familiar to me, that by several most accurate analyses, which I instituted in order to have a test of accuracy, I almost always obtained equal results, so as to convince me that this mode of analysis was to be relied upon.

Of course there occurred descriptions of urine which could not with propriety be marked by any of the numbers alluded to; well then, I marked them by ¾, 1¼, 1¾, &c.

In order to know the positive quantity of phosphates which was contained in the different sorts of urine, I made most accurate analyses of each of them, and these analyses the more increased my confidence, as they showed quite similar results to the numbers proposed.

When meeting with alkaline or ammoniacal urine, of course, after having well stirred it up, so that the sediment, if there be any, should be equally distributed throughout the whole, I first tried the degree of alkalescence, and according to this degree I added a few drops of soda-solution or none; and when meeting with albuminous urine, I first precipitated the albumen or boiled the urine, after the addition of the solution of soda, in which case the albumen does not coagulate. The eye may often prove fallacious; however I could never deviate far from the truth, and the error committed could never surmount the quantity of phosphates which I marked by ¼, or at the most ½.

In accurately determining the quantity of phosphates present in any of the numbered types, I used the following method: Four ounces of urine are made ammoniacal by the addition of a few drops of ammonia; the precipitation thereby produced is redissolved by acetic acid, and then a sufficient quantity of a solution of oxalate of potash is added; a precipitation of oxalate of lime takes place, and this having subsided, after about twenty-four hours the urine is filtered. Thereby a residue of oxalate of lime and a filtered fluid is obtained. The oxalate of lime is then burned with the filter, and carbonate of lime results. Now, on gently lifting the lid of the crucible, a few drops (3 to 5) of concentrated sulphuric acid are added; the acid is evaporated at about 200°, and then the sulphate of lime is strongly burned. The resulting weight of sulphate of lime multiplied by 0·7647 gives the accurate amount of phosphate of lime, the weight of the filter-ash having been previously deducted. To the filtered urine is then added a few drops of ammonia, and a precipitate results, which consists of a phosphate of ammonia and magnesia, (triple phosphate.) After a few hours this precipitation is collected on a filter, and the residue, burnt with the filter and weighed, indicates the exact quantity of pyrophosphate of magnesia, the weight of the filter-ash having been here also previously subtracted. By summing up the quantity of phosphate of lime and of phosphate of magnesia, we shall obtain then the exact quantity of earthy phosphates which is contained in four ounces of urine, from which may be easily calculated the quantity contained in one ounce, or in 1000 parts of urine. (This method of analysis has been investigated by Dr. Heintz, at Berlin, and kindly communicated to me by Dr. Boecker.)

The following now are the results of the analyses which I have performed in this way, on which we may depend the more as most of them have been twice repeated. First, the urine, which I marked by 0, always contains a very small quantity of phosphates; this quantity, however, cannot be detected in the above-described way, but it never seems to exceed the quantity of 0·2000 grains in one ounce of urine. There are many steps between no phosphates at all and of 0·2000 grains; they require a more accurate study in order to show the preternatural decrease of the quantity of earthy phosphates in the urine. But as we shall consider here only the hypernormal increase of the quantity of phosphates which are excreted in the urine in diseases, I am compelled to waive this discussion at present. I have only to state, that in every case we may consider a urine marked by 0 as containing 0·2000 grains of earthy phosphates, or less; never more than this in one ounce. With respect to the other descriptions of urine, I should really far exceed the limits of this paper by adducing the results of the single analyses: they can be seen in a pamphlet which I have lately published in Germany, entitled, "Zur Physiologie und Pathologie des Phosphorsauren und Oxalsauren Kalkes." Goettingen, 1850. Here I only beg to state the general results as follows:—

A urine marked by ½ contained nearly 0·250—0·300 grains of earthy phosphates in one ounce; a urine marked by 1, 0·400—0·450 grains; a urine marked by 1½, 0·550—0·600 grains; a urine marked by 2, 0·700—0·750 grains; a urine marked by 3, 1·000—1·050 grains; and lastly, a urine marked by 3—4, 1·000—1·3000 and more grains of earthy phosphates. By referring to these numbers we may easily approximatively calculate the quantity of earthy phosphates voided in twenty-four hours, and I am sure we shall never be far from the truth.

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After these explanations I have to speak of the different quantities of phosphates which I met with in the urine in different diseases. My observations of course do not extend to all diseases; it would scarcely be possible to give such accounts in a large number of years, notwithstanding I observed a sufficient number of cases with respect to this point for the deduction of some general results.

First, I have to remark generally, that scarcely any disease occurs, in the course of which we should not sometimes find an increased quantity of phosphates; that at any rate there exists no disease which does not admit of some hypernormal excretion of phosphates at some one of its periods; on the other hand we meet at different periods of disease with quite different quantities of phosphates, as, for instance, it often happens that in the first stages of diseases we do not find an increased quantity of phosphates at all, and that at a later period a large quantity is excreted. With respect to this point, and in order to obtain results which can be depended upon, it is therefore indispensably necessary to examine the amount of phosphates almost every day; we shall never arrive at correct views if we do not attend to this rule.

Secondly, it must be stated as a general result, that the quantity of phosphates excreted does not depend as well upon the nature of the disease itself, as upon the individual afflicted; and if in one case of rheumatism we find, for instance, a large amount of phosphates in the urine, we do not detect any increase at all, perhaps, in another case. This point really is a very important one: it affords the best proof of the general fact, that we are always wrong in speaking of certain diseases as of individuals, or as of well defined and marked never-varying alterations of the physiological state of the body, and that we shall never succeed in obtaining positive results, if we do not direct the most accurate attention to the previous history and the former state of the individual who has become afflicted with any disease—in other words, if we do not individualize disease.

It may be concluded from these short remarks, that it is very difficult to give an account of the excretion of phosphates, generally applicable and absolutely right in almost every case. However, we meet with some pathological states which, generally speaking, very rarely show an increase of the excretion of phosphates; with other affections which always show an increased quantity of phosphates in the urine and even a most anomalous quantity; and with others which are generally distinguished by a slighter, but continued loss of phosphates. To these states and affections I shall now draw attention, and I scarcely know how to give a better explanation of them, than by referring to the numbers above alluded to.

I have met then with urine containing only such a quantity of phosphates as I have marked by 0 or ½—

1st. In persons who, always showing a good state of health, a normal complexion and colour, and a strong constitution, have accidentally become afflicted with disease or injury, as, for instance, with syphilis, wounds, contusions, &c. As I really considered these persons as nearly healthy, at least for so long a time as the affection remained a local one, I am inclined to view the quantity of 0·1000—0·2000 grains of earthy phosphates in one ounce of urine as nearly the normal quantity. It must, however, be remembered, that it is always extremely difficult to speak of normal states of health, a precise distinction between health and disease being incompatible with our present amount of knowledge, if conceivable at all.

2nd. In the first stages of acute diseases, as, for instance, of acute rheumatism, pneumonia, pleuritis, peritonitis, &c. When these diseases happened in persons who did not exhibit any other signs of diseased constitution, and had never been ill before, I did not, either during the whole course of the disease nor upon recovery, find an increased quantity of phosphates in the urine. But it was seldom I met with such persons. When, on the other hand, persons were afflicted with acute diseases who never enjoyed good health before, or suffered from dyscrasia of the blood, I almost always met with an abnormal quantity of phosphates in the urine after the acute stage having ceased: there appeared now all the symptoms of the original dyscrasia, and either the reconvalescence was a very slow one, or emaciation, general weakness, &c., was still increasing; instead of acute tuberculosis, the symptoms of chronic affection of the lungs appeared; instead of acute rheumatism, chronic rheumatism remained. From these very remarkable differences I concluded with certainty, that it was not the disease itself which caused a decrease of the excretion of phosphates, but that this decrease was exclusively dependent upon the acuteness of symptoms, that is to say, the feverish action—a circumstance which I shall refer to in the following parts of this paper. It must also be mentioned, that in some cases of acute disease I met with a quantity of phosphates, as marked by ¾ or 1, even during the first periods; in these cases, however, the quantity of phosphates was very considerable after the acute symptoms having ceased.

3rd. In the first stages of typhus fever. Here I always met with a decrease of the quantity of earthy phosphates in the urine, a result which, after a great many analyses, seems to be a characteristic one. With respect to the later periods of typhus, however, the same refers to them as I have stated on acute diseases generally.

4th. In some cases of Bright's disease, as well as in some persons who suffered from stenosis of the orifices of the heart, or from insufficiency of their valvules. But some cases also occurred where an absolute increase of phosphates was met with; however, in these cases complications or affections of other organs could be observed; and I am inclined to suppose that the dyscrasia of the blood, which leads to the well known degeneration of the kidneys, as well as the dyscrasia which results from the above-mentioned diseases of the heart, does not cause by itself any increase of the earthy phosphates in the urine.

5th. In the first stages of carcinoma, (but only in these:) an observation the more interesting, that Rokitansky alludes to the preternatural development of the bones, or the proportion of phosphate of lime in persons afflicted with cancer. I myself found, in a post-mortem examination of an individual who died from carcinoma of the lungs, all the cartilages of the ribs ossified; which was never the case in persons who during life passed for a long time increased quantities of phosphates, and had been afflicted, for instance, with tuberculosis.

I have to add generally, that in all cases where I observed no increase of the phosphates in the urine during *the whole course* of a disease, I likewise never observed emaciation; that is, want of formation of cells; these persons altogether were of strong constitution and showed a remarkable development of the muscles. In these persons blistered surfaces healed far more speedily than was the case in persons who passed a hypernormal quantity of phosphates, the average time being three or four days. Of course in acute diseases emaciation was observed, though no abnormal loss of phosphates could be detected; the same was the case with Bright's disease. In these affections, however, many circumstances concur, which sufficiently account for the waste of tissues—circumstances which do not require any further explanation.

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With respect to the quantities of phosphates which I marked by ½, 1, 1½, and even 2, I found them to be present in very different and nearly all sorts of diseases, varying on different days in one case, and always remaining of nearly the same amount in others. These cases proved in a most remarkable manner that it is not the disease itself which causes the excretion of phosphates, but that there must necessarily exist some other cause in the economy, to account for the excretion alluded to. I observed the mentioned quantity of phosphates, that is to say, from about 0·350 to 0·700 grains in one ounce of urine, in chronic rheumatism of the joints or muscles, in the chronic stage of tuberculosis, in the ulcerative stage of carcinoma, in different sorts of chronic diseases of the skin, such as eczema, impetigo, ecthyma, and boils, slight cases of scrofula, syphilis, emphysema of the lungs, and especially in cases of chronic dyspepsia, hæmorrhoids, &c. It is impossible to give any special account of the quantities observed, unless I give a special explanation of every case, an explanation which would too far exceed the extent of these papers; moreover I shall speak about the cause of the excretion of phosphates in the following part of this communication, and we shall become acquainted thereby with those circumstances on which the excretion of the different quantities in different diseases depends; but I have to state, that the general complexion of patients in these cases rarely surpassed what we call the middle degree and often even did not surpass an emaciated, feeble state of health; these patients do not get fat or muscular, in spite of large quantities of wholesome food; on the contrary, the more they take, the less they gain strength and power; indeed, as long as the excretion of phosphates is abnormally increased, the formation of cells is impaired.

Thirdly, I have to speak of diseases in which I met with the largest quantities of phosphates, such as marked 2, 2½, 3, and 4. These quantities have been found:—

1st. In scrofula and rickets. Especially in children affected with scrofula and ulcers, or other diseases of the skin, as impetigo, boils, &c., with diarrhœa and atrophy. I found large quantities of phosphates passed by the urine; in one case of inflammation in the knee-joint, in a young man who was afflicted with scrofula, the quantity of earthy phosphates passed amounted to nearly a drachm every day.

2nd. In tuberculosis, especially in those stages where the very acute state and deposition of tubercles in any organ has ceased, a slight fever, however, and the dyscrasia of the blood continues. I did not observe any increased quantity of phosphates during the first attacks of acute tuberculosis, exhibiting the well known symptoms of typhus: but as soon as the localization had taken place and an exudation in the lungs was produced, the general symptoms decreasing in acuteness, the phosphates appeared in the urine in an increased proportion, and soon amounted to 0·8, 0·9, or even 1 grain in one ounce of urine.—This being the case, I was rather puzzled at not finding any increase of phosphates during the very last days of some persons dying of tuberculosis. But also this point I shall account for in the following part of this paper.

3rd. In such cases of acute rheumatism which occur in anæmic individuals, and are well known to be accompanied by a remarkable loss of flesh, or by a want of formation of cells. I have mentioned already, that in the acute stages of these cases, I met with no increased proportion of phosphates at all; but as soon as the acute stage was over, the phosphates appeared, and then rapidly increased to nearly the same amount as I observed it in tuberculosis.

4th. In the last stages of carcinomatous and some other affections, yielding large quantities of pus or ichorous secretions, such as psoas abscess, suppuration of the cellular tissue, &c. In these very cases, the general emaciation of the patients was very remarkable, although readily accounted for, if we take into consideration, that for the formation of cells three substances are required—namely, albumen, fat, and phosphate of lime, and that two of these were evidently excreted from the economy in an immense quantity; on the one hand, by the suppuration; by the urine on the other. However I also met with some rare cases in which a remarkable emaciation took place, in consequence of abundant suppurations, without a remarkable increase of the phosphates having been observed. But these cases could scarcely afford any objection to my other results, the suppuration being so large as sufficiently to account for the emaciation itself. It is self-evident, that in all cases where emaciation takes place, we must not only look at the quantity of phosphates eliminated from the economy, but likewise at the quantity of albuminous and fatty substances which have been taken as food during the course of the affection, which are present at its commencement, and which are eliminated in the form of pus, serous exudations, urea, &c.

With respect to the other cases referred to, it must also be generally stated, that in almost every case the emaciation was a very rapid one during the excretion of large quantities of phosphates, and sores of blisters applied to these individuals scarcely healed at all, or at least not till after a long time. We may provide persons who are afflicted with these diseases with the largest quantities of albumen and fat, but we never shall produce thereby a remarkable increase of tissues or complexion—that is to say, of formation of cells, if we do not diminish at once the excretion of the phosphates by the urine. The disease will not cease as long as their excretion continues, but if a decrease of the phosphates in the urine takes place in an early stage of the affection, we may be induced thereby to believe that the condition is really an improving one. On the other hand, it should be remarked that the nature of the diseases alluded to is a very different one; that, therefore, the hypernormal excretion of phosphates is also here independent of the disease itself, and that there must exist some other cause of it, the investigation of which will be the subject of the following part of this paper.

These are the chief points which I have to refer to, with respect to the different quantities of phosphates excreted from the economy in different diseases. The general conclusions are, that a hypernormal excretion of earthy phosphates by the urine is independent of the nature of the disease; that wherever we observe such an excretion, we find a corresponding deficiency of formation of cells, emaciation, and loss of strength; but that, finally, this deficiency of formation of cells is not always exclusively caused by a hypernormal loss of phosphates; that, on the contrary, it is often only the result of fever, of suppuration, of want of nourishment, or of any other loss of materials necessary for the regeneration of tissues and organs.

There is one point more, which I have to direct the attention to. It having been well known for a long time and more accurately established by the inquiries of Dr. Bence Jones, that the quality and quantity of the urine are very different at different times of the day, I also examined the quantities of phosphates voided at different periods in twenty-four hours. It is not here the place to explain, that by repeating the very interesting examinations of the urine, published by Dr. Bence Jones in the *Philosophical Transactions* Part II. 1849. p. 235, I did not obtain quite the same results as this able physician respecting the decrease and increase of the acidity of the urine; I only have to remark with respect to the phosphates, that this quantity also is

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very varying at different periods of the twenty-four hours. But, from a great many analyses of this kind, I could not detect any certain regularity in the excretion of the phosphates; it may only be stated that generally in persons who are known to pass hypernormal quantities of earthy phosphates during twenty-four hours, in one sort of urine, out of three or four sorts passed after dinner, we find the largest quantities of phosphates; and that likewise generally one specimen of urine, out of three specimens passed in the morning, contains a large quantity of them; the other ones showing either a decrease from, or an increase to, the highest amounts, or no hypernormal excretion at all. This being a fact, we shall never be able to judge of the quantity of earthy phosphates present in one ounce of urine of any person, unless we examine the whole quantity which is passed during twenty-four hours. A quantity of urine, passed at a certain time of the day and examined with reference to the phosphates, will always lead to wrong conclusions respecting the whole quantity of phosphates excreted during twenty-four hours. I have carefully attended to this circumstance in my observations, so as to make them trustworthy in this respect; it should never be neglected by others entering upon similar investigations.

To sum up now the results of the first and second part of these communications, I have shown in the first that, supposing a sufficient quantity of albumen and fat to be present, the produce of cells evidently increases by the administration of phosphate of lime; that, on the other hand, by this administration we may promote the cure of diseases which shown a deficiency of formation of cells; and that especially in scrofulous affections the administration of phosphate of lime has often proved most beneficial. On the other hand, in the second part, I have established the fact, that in nearly all chronic diseases, where we observe a loss of flesh, emaciation, and general weakness, a hypernormal quantity of phosphates is always excreted from the economy by the urine, and more especially in those cases where the administration of phosphate of lime proved most beneficial. Perhaps it might be supposed that these quantities had been increased by the phosphate of lime taken as a remedy; but this is by no means the case; on the contrary, my observations prove that, even during the administration of phosphate of lime, the quantity of earthy phosphates in the urine often decreases, supposing a proper treatment in other respects to be employed. Well, then, the harmony of the results of the above two parts is so striking, that we scarcely can admit of any doubt in their truth, and the physiological as well as the pathological importance of the points alluded to is so apparent, that it does not require any further explanation. We know that the phosphate of lime is indispensably necessary for the production of cells; we know that in a great many diseases the phosphates are excreted from the economy in very abundant quantities by the urine; and we know even that in these diseases the formation of cells is deficient. Shall we have any doubt that by substituting the quantity of phosphates excreted by the urine, or by removing the cause of their excretion itself, we must afford a great benefit to persons who are afflicted with the diseases alluded to?

There remains one difficult point, which I have to refer to. In the way which I relied upon in determining the quantities of phosphates in the urine, I precipitated the phosphate of magnesia, as well as the phosphate of lime. This having been shown microscopically and chemically, the question arose, whether the results which I spoke of with respect to the phosphate of lime would not require an amendment? It is true the proportions between phosphate of lime and phosphate of magnesia are very different in different urines; however, I rarely observed the quantity of magnesia to exceed the quantity of lime; on the contrary, it was more often found less. I therefore concede, without any hesitation, that the exact quantity of phosphate of lime could not be ascertained in the manner which I adopted; but generally we shall not be far from the truth in supposing half the quantity of earthy phosphates present to consist of phosphate of lime, this being generally below and very rarely beyond the real quantity. I must repeat with respect to this point the above-given remark, that I have only looked for approximative results, and that I believe them sufficient for the conclusions which I have drawn. All these relations demand a very accurate revision; nor can I refrain observing that the proportions between phosphate of lime and phosphate of magnesia, in different diseased persons are highly interesting, so much so as to recommend their most accurate study and exact analysis. In expressing this opinion, I refer, for instance, to a communication in the *Annales de Chimie et de Physique*, Juin, 1849, tom. xxvi., 3e serie, entitled, "Recherches sur les Causes du Goître et du Crétinisme, par M. T. Grange;" but I am compelled to waive the discussion for the present, it being rich enough in itself to form the subject of a special treatise.

ON A CASE OF

ANEURISM OF THE FEMORAL ARTERY, WHICH BURST EXTERNALLY.

SUCESSFULLY HEALED BY LIGATURE ON THE UPPER PORTION OF THE ARTERY.*

By D. De Berdt Hovell, F.R.C.S.E., Clapton.

Hannah M——, aged forty, married, of bilious temperament and unhealthy aspect, who has been for some time the subject of phagedænic ulceration, probably of specific origin, on the left lower extremity, became a patient under my care on the 13th November, 1850, with a pulsating tumour, the size of the fist, on the inside of the thigh, at the junction of the lower with the middle third; the tibia of the same leg was much enlarged, periosteum thickened, and presenting several patches of ulceration of a healthy character. The tumour of the thigh was eight months ago the size of a walnut, and has much increased in size latterly, particularly the last two or three days, and was now hard, not moveable, adherent below, superficially pulsating and dilating; a bruit was very audible by the stethoscope, posteriorly and internally; pressure on the femoral artery above the tumour stopped pulsation, and reduced somewhat its size. The skin had ulcerated over the tumour, and on the evening of the 15th slight hæmorrhage had occurred; on the 16th, a second attack of hæmorrhage took place to the extent of a pint, which caused faintness.

It was not clear whether the case was simply one of aneurism, or of disease of the bone involving the artery, nor whether the disease was malignant. The healthy state of the ulcer on the tibia was an argument against the malignancy of the disease, and I determined to tie the femoral artery, following Hunter's operation. Immediately on tying the artery, pulsation ceased in the tumour, which also diminished in size.

Nov. 18th.—Incision appears healthy; the tumour remains hard; the ulcerated spot looks dark; the ulceration over the tibia continues quite healthy: the warmth of the limb has been perfectly maintained.

28th.—Patient continues remarkably well, and the wounds healthy; a slough, an inch in diameter, has formed, extending deep into the tumour, which diminishes in bulk and is much flatter and softer; no hæ-

* Read before the Hunterian Society, March 12, 1851.

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morrhage whatever; the ligature separated on the 21st day.

Dec. 28th.—By gentle pressure, a slough separated, consisting evidently of a portion of the sac of the aneurism, giving vent to a copious discharge of offensive pus, which continued for some days, and which, showing a tendency to bag towards the pubis, was counteracted by the application of a bandage; a layer of the fibres of the vastus internus forms a curtain over the outer half of the opening.

Jan. 1st.—The wound has cicatrized, all appearance of the tumour is gone; there remains evident thickening of the periosteum around the lower end of the femur. The patient is much improved in health, and is growing fat; the ulcer of the tibia has healed, but the bone continues enlarged and nodulated.

ON A

CASE OF CALCULUS OF THE URETHRA AND PROSTATE GLAND, WITH OBSTINATE STRICTURE OF THE URETHRA.

By Benjamin Barkus, M.D., M.R.C.S.L., Gateshead, Newcastle-upon-Tyne.

Thomas A——, aged fifty-seven, joiner, married, and has a family; is of intemperate habits, and has suffered repeatedly from gonorrhœa in his youth. Has suffered from difficulty of making water for the last thirty years, for which he was first placed under treatment about eighteen months ago, when he was seized with retention of urine, followed by extravasation into the scrotum and perinæum. He was admitted into a hospital, and repeated and ineffectual trials were made to pass a catheter. After having been in the hospital for about four months, he was discharged, passing a small stream by the urethra, and the urine flowing by several fistulous openings in the perinæum and scrotum; these gradually closed, and he continued to pass a very small stream, until he placed himself under my care, on Feb. 19, 1851, labouring under another attack of retention and extravasation of urine into the cellular tissue of the scrotum. Free incisions were made into the scrotum, giving issue to urine and pus, and repeated attempts were made to pass a catheter, which failed. The man was typhoid; the urine passed by the openings in the scrotum; there was extensive sloughing of the scrotum, almost exposing the left testicle. In the course of a week the parts became clean, and the man's health improved. All efforts to pass an instrument into the bladder were fruitless.

On March 2, whilst endeavouring to pass a small sized catheter, it came in contact with a calculus anterior to the bulb. An incision was made down upon it, at the junction of the scrotum and perinæum, which latter was densely hard, and almost cartilaginous in its whole length. A calculus, of the size of a filbert-nut, was extracted, giving considerable relief. From this time the man's general health improved, yet it was found impossible to pass a catheter beyond the bulb, where the instrument seemed to be resisted by a dense, unyielding contraction; in fact, the urethra appeared to be obliterated. It was now resolved to make a passage to the bladder, of sufficient size to admit a full-sized catheter, if possible. With the assistance of my friends, Messrs. Pearce and Gibb, I performed the operation on the 13th March, eleven days after the first operation. He was placed in the position for lithotomy, and, after having been rendered insensible by chloroform, a catheter was introduced as far as the bulb of the urethra, and incision made down to the point of the instrument; with the aid of a director and the catheter, gradually advanced, the incision was carried to the prostate gland, where the instrument came in contact with another calculus, which occupied almost the whole of the prostate. An incision was then carried through the lower part of the prostate, and a stone about the size of a large filbert-nut extracted, and the catheter now glided into the bladder. From this time the man has gone on well; the catheter was at first allowed to remain in about a week, but it is now only introduced occasionally for a few hours in the day. The external wound is almost healed, and very little urine flows from it.

April 8th.—The urine flows in a full stream from the urethra, and the man's general health is better than it has been for several months.

This operation may be considered as a modification of that advocated by Professor Syme, for the cure of stricture. With the learned Professor, it is a *sine qua non* that a grooved staff be passed into the bladder. In this case, all efforts of myself and friends to pass an instrument proved fruitless. Probably Professor Syme might have succeeded, as he scarcely admits having failed to pass an instrument in every case that has come under his care.

ON THE TREATMENT OF SMALL-POX.

By Joseph Grosvenor Pasquin, M.R.C.L.S., Birmingham.

Having for many years watched the unsuccessful treatment of small-pox, and also the fatal termination of that disease, even when placed in the hands of the most skilful surgeons and physicians, I was therefore induced to give to it my most devoted and undivided attention, supposing, as I did, that some valuable addition might be made in the treatment thereof. After mature deliberation thereon, it was my opinion that the pitting and consequent disfiguration of the face after that disorder, was dependent upon the confinement of the matter in the pocks for too great a length of time, which thereby would cause a slough to form in the cellular tissue lying between the cuticle and fascia of the face, which, being so thin, is never more regenerated, thereby causing the cuticle to fall into the space where the cellular tissue is then wanting, and thus follows the pitting.

Secondly I was of opinion, that by puncturing each pock previously to its coming to perfection, and then treating it with poultice, as a common abscess, I should not only avoid the pitting but also draw out of the system that putrid matter which, had the pock been left to ripen, would not only have caused the slough and pitting, but would have been absorbed into the body, and produced most injurious results to the system in general.

Thirdly. In numerous instances, I have seen patients die from the eruption breaking out, not only on the tongue, fauces, and pharynx, but also on the most delicate part, the larynx. This I also thought might be obviated by placing a few leeches over the external region of the larynx, supposing it would, by diminishing the circulation in that region, reduce the size of the pocks, and also give play to the thyro-arytænoid muscle, and thereby prevent suffocation.

Having formed these opinions, I felt determined to try them in the next case of small-pox that came under my notice, which I have now done, and beg leave to report to you the result of my experience:—I have had seven cases, four wherein the larynx was not at all affected, on which I tried the experiment of puncturing every pock on the face, and afterwards applying repeated poultices. This treatment succeeded to my utmost satisfaction, the face being left as clear of marks as it was previously to the attack of small-pox. I had three more with affection of the larynx, the respiration being so difficult that I expected asphyxia would come on in a few hours. To these I applied leeches over the

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region of the larynx, and on the following morning I found the respiration had become perfectly free and easy.

One of the three cases last reported, is that of D——, labourer. This was the worst case of confluent small-pox I ever witnessed in the whole course of my medical career. He was, in the early stage of the disease, attacked with great difficulty in breathing; his tongue, soft palate, pharynx, and larynx, as far as I could see, being covered with pocks. I applied leeches at night, and on the following morning his breathing was perfectly free and easy. His face was so completely covered with pocks, that I could not find one space over his whole face, sufficient to lay on a grain of sand, which was uncovered by any pock. In this case I punctured as many pocks as I could myself, and requested his mother and sister to puncture the remainder. He is now up, and doing well, and he has not a mark upon his face; but upon this case I will report to you hereafter. In this case the feet were very painful previously to the appearance of the pocks. I applied poultice.

ON A CASE OF ACUTE PERITONITIS FROM INJURY.—RECOVERY.

By H. Parker Laurence, Esq.

Assistant-Surgeon Second Belooch Battalion.

Luxooman Perware was admitted into hospital on the morning of the 30th Dec., 1850. The symptoms in his cases were as follows:—Violent tossing from one side to the other, his hands pressing upon the left epigastric region; he seemed to suffer excruciating pain; his respirations were very short and suppressed; pulse small—could not be properly counted, owing to his extreme restlessness. The bowels had been opened in the morning. Is an artillery-driver, and states that he received a severe kick from a horse. The pain extended from the outer margin of the false ribs across to and below the umbilicus. Prescribed, tincture of opium, forty minims, to be given immediately; and four dozen leeches to be applied over the seat of pain. Directed that twenty minims more of laudanum be given an hour hence, if the pain did not subside. It was found necessary to give this dose. When seen in the afternoon he appeared to be somewhat relieved; had dozed for a couple of hours. Prescribed one grain of extract of opium at bedtime.

Dec. 31.—Feels better, but still suffering from lancinating pains. Complains, too, of thirst. Pulse very small, and tongue dry. To have of sulphuric ether a drachm, acetated liquor of ammonia a drachm, tincture of opium ten minims, camphor mixture one ounce, in a draught, one dose, and to be allowed lime-juice and weak mutton-broth. Twelve A.M.: Pain only a little less; seems low. Ordered tincture of opium ten minims, and port wine two ounces, every two hours; and hot stupes to be constantly applied to the part. Six P.M.: Has had three doses of the wine and opium; pain if anything easier; pulse about the same. Repeat the wine and opium at bedtime.

Jan. 1.—Passed a tolerable night; pulse not more than fifty; pain much the same. The wine and opium in the same doses, every two hours. Five P.M.: Find that the pain has abated; bowels not moved since his admission. An injection of one ounce of castor oil and tepid water to be gently used; the wine and opium at bedtime.

2nd.—Slept pretty well; evacuations by enema copious and fœtid; pain a good deal less. The tincture of opium to be reduced to five minims; port wine, two ounces, to be given every third hour. His diet has been confined to mutton-broth and rice-water. Five P.M.: Pain much less. To have seven grains of compound ipecacuanha powder at bedtime.

3rd.—Pain has lost the shooting character. Port wine by itself, at twelve A.M.: soup diet. Five P.M.: Gets better. The wine and opium at bedtime.

4th.—Slept well; a very slight pain on pressure; tincture of opium, seven minims; port wine, two ounces, every four hours.

5th.—Little or no pain. Tincture of opium, five minims; port wine, two ounces, every third hour. Still the soup diet.

6th.—Decidedly better. Omit opium; wine, alone, two ounces, twice a day.

7th.—Declares that he is free from pain. No opium; sago and port wine, and soup.

On the 8th, 9th, and 10th received no medicine. Can sit up and go quietly about.

11.—Consider him cured.

In the treatment of visceral inflammation in a tropical climate, I should always premise, as in this case, by local depletion. I may be blamed for having used an enema, but I thought no great harm could result from the mild one that was given, and thinking at the time that a great deal of fæcal matter might be lodging in the canal, I judged its removal to be necessary and expedient.

ON A CASE OF THYMIC ASTHMA.

By John Armstrong, M.D., M.R.C.S., &c., Gravesend.

On Jan. 29th, 1851, Mrs. M——, residing in London, came to Gravesend with her child, aged five months, for change of air, by the advice of her medical attendant. A few days after their arrival I was requested to see him immediately, "as he had been seized with something like a fit." On my arrival, he had recovered, and was in his mother's arms, looking pale and frightened. He is a fine, well-formed child, with large head, not frontally prominent, fine skin, blue eyes, pallid countenance. I received the following history:—Three weeks prior to this, while out of doors, the child was suddenly seized with great difficulty of breathing, became almost livid in his countenance, and seemed as if he would be strangled before he could get his breath. Mrs. M—— hastened home, plunged him into a hot bath, and sent for the nearest medical gentleman.—When he arrived the child was better. He informed the mother that it was probably congestion of the lungs arising from exposure to the cold. He was placed under treatment, and after two or three days appeared better; still there was sickness and some difficulty of swallowing, and the child was sent down here for change of air.

The history of the present seizure was as follows:—He had been sleeping, roused up, began to fret, and made a peculiar noise; seemed as if he could not get his breath, and appeared going into a fit: it soon, however, passed away and the child appeared as usual.—There had been, on some former occasions, some slight "child crowing," and also on this occasion. His bowels were correct; there was no constitutional disturbance; the gum covering the central lower incisors was swollen and hot, and was therefore lanced; some aperient and anti-spasmodic medicines were prescribed. He continued without any further seizure, and Mrs. M——, after about a week or ten days, returned to town. A few weeks after this, the child had a similar attack, though not so severe, apparently brought on by cold. The child was weaned when about eight months old, and was again taken down here. Some time after their arrival the child was attacked with symptoms of catarrh, which were slight, and were not considered sufficient to require medical attendance. After a few days (April 12th) he experienced another and more se-

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vere seizure than any former one, and I was sent for in great haste. The history given was the following:—The child became suddenly dark about his mouth, held his breath, his eyes seemed starting from their sockets, and his limbs became violently stretched. He appeared to recover his breath, began to cough, and when I arrived the attack had passed away. He looked frightened; his face pale and bathed in perspiration; pulse weak, intermitting, and quickened; skin cold. There was considerable fulness of the veins of the neck; the chest resonant throughout; sibilus and rhonchi heard over the left lung, and partly the right; most distinctly heard on each side of the dorsal spine.

That night I was summoned to the little sufferer, who was stated to be dying. The attack was much the same; he had been sleeping, awoke up, became livid, convulsed, and apparently gasping for breath. I found him pale, with his head and face bathed in perspiration, with a feeble intermittent pulse, a loose frequent cough, troublesome at the termination of the attack. There had been no crowing respiration. The attacks of dyspnœa now became frequent; he rarely went to sleep without an attack on awaking. They were now invariably accompanied with convulsions of an epileptic character. The countenance during the attack, lips especially, were quite livid, the tongue protruded, eyes turned in towards the nose, and nearly constant carpo-pedal contractions. The sides and centre of the lower part of the throat swollen, the jugular veins much distended; and the respiratory murmur was harsh or indistinct at the posterior of the thorax. As each convulsive attack subsided, there was a peculiar, harsh, incessant, convulsive cough, by which small portions of frothy whitish phlegm were expelled from the trachea; and after some time about a teaspoonful or two was discharged, and the child seemed relieved. The difficulty of swallowing, especially of semi-fluid substances, continued, appearing always to excite coughing. Nothing gave relief; he continued to get worse, and died after an attack, on April 24th, about a fortnight after the catarrhal seizure.

Post-mortem examination sixteen hours after death — In the examination of the body, the chest chiefly attracted attention. There was a large thymus gland, extending from the thyroid gland to the pericardium, and laterally filling the space between the trachea, clavicle, and first rib. It was dense, firm, lobulated, of a fleshy colour; contained no fluid; it was upwards of an ounce in weight; its greatest density and development appeared on the left side; the large veins appeared almost flattened by the pressure; the par vagum and recurrent were pushed aside from their usual course, and must have been much pressed. The heart was of ordinary size, nearly empty. The foramen ovale closed. Internally the larynx and trachea were pale, except at the part where the thymus pressed, which was reddened; the remainder was natural, and without inflammatory appearances. The lungs, anteriorly, were natural; posteriorly, extensively carnified. Abdominal viscera healthy. The head was not examined.

Remarks.—This is the second case of this form of "laryngismus stridulus" which has occurred in my practice after a tolerably extensive acquaintance with infantile diseases for twenty years. The other was so similar in the essential characters both of the symptoms and post-mortem appearances, that after the above lengthened detail, I feel it is unnecessary to give them.

It is obvious that I do not class the ordinary cases of laryngismus stridulus, as Good has termed it, with the form under consideration. I have generally to treat cases of that form every year, which have been sent from London for change of air, (for I may, in passing, observe, that among the children of this healthy locality, the disease is almost unknown.) The London children soon recover under the influence of fresh air, and such treatment as the case indicates. But the variety which Kopp has called thymic asthma, is a much more formidable affair. I am aware that there is great difference of opinion respecting the disease, some even denying that the enlarged thymus is the cause of such alarming symptoms, but the careful, truthful observations of so many persons must carry conviction to unprejudiced minds.

To Mr. Hood, of Kilmarnock, we are indebted for the first clear account of this formidable complaint, although Hassé, in his "Pathological Anatomy," says, "That Kopp first attempted to connect this preternatural enlargement of the thymus gland, and its pressure on the trachea, with an alarming ailment peculiar to childhood, which he accordingly termed thymic asthma." One cannot help feeling surprised at this error, as Hassé is obviously pretty well acquainted with English medical literature, and Kopp himself, in his Essay, adverts to Hood's paper. In addition to the papers and cases by these gentlemen, we have some by Drs. Copland, Montgomery, and West. This latter gentleman has observed one case, narrated in his very admirable "Lectures on the Diseases of Children," and which corresponds very exactly with the two cases observed by myself.

The conclusion is unavoidable, that though this form of the disease is very rare, yet that a most formidable and fatal disease is occasionally met with, dependent on enlarged thymus gland. That many of the symptoms exist in common with the ordinary forms of "laryngismus" is unquestionable, and therefore laryngismus stridulus must be considered as a generic term including several species. And no doubt, by looking at the subject in this light, the discrepant opinions on this disease can be reconciled.

The disease presents itself under three forms:—

First. It occurs as a consequence of teething, intestinal irritation, worms, eruptions about the head, or it may be of a nervous or spasmodic character; and by suitable treatment—especially change of air—is generally cured. Mr. Robertson, of Manchester, in the *Medical Gazette*, vol. viii., new series, has very clearly shown the benefit of change of air, and I fully agree with him; but we must not be misled by supposing that change of air is all that is requisite; so long as there are sources of irritation, the disease will probably go on till they are removed. I have been frequently consulted under such circumstances, and cases which had come here for change of air remained "in statu quo;" but as soon as the disordered function was rectified, the disease began to subside, and finally ceased. I could enumerate many cases of that description.

Second. The next class of cases are those which the late Dr. Hugh Ley so admirably portrayed; but although he threw much light on the subject, yet his views, it must be admitted, were too limited. He attributed these affections to enlarged bronchial and thyroid glands. Doubtless there are cases of this description—and bad cases they generally are—but I believe they do not occur so frequently as Dr. Ley supposed. Change of air, a healthy nurse, or suitable diet, close attention to the gums and bowels, and the administration of syrup of iodide of iron, will constitute the chief remedies.

Third. The last, most rare, and as I believe, the most formidable class, are those which have formed the subject of this paper, and the treatment of which is by no means settled. The first case I had was seen by my partner, the late Mr. Park, of this town, and he took the views entertained by Dr. John Clark as to the treatment. Accordingly, leeches and blisters were applied to the head, and mercury was given freely; but the post-mortem examination gave no signs of head dis-

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ease, and nought save the hardened, enlarged thymus was discovered to explain the distressing symptoms.—Mrs. M——'s child was treated by constant attention to the gums and bowels, leeches and blisters in the region of the thymus, mercury and anti-spasmodics, but with scarcely any relief. My impression is, that occasional leeching on the upper part of the chest, with the application of iodine externally and internally; strict attention to every source of irritation, with a view to its immediate removal; *causing the child to lie with its head well raised during sleep;* a healthy atmosphere, and light food, will constitute the treatment most likely to prove beneficial.

But although I cannot point out any infallible mode of treatment, a few words on diagnosis may prove beneficial.

Dr. Copland, in his "Dictionary," says truly, "The diagnosis of enlarged thymus gland is a matter of importance, but of difficulty," and has ably pointed out the leading distinguishing features.

Those upon which I would place most reliance are, the sex of the child (males constitute by far the majority of those already reported); the pale, white, soft countenance; the permanent fulness about the upper part of the sternum, extending upwards nearly to the thyroidal region; an almost constant fulness of the veins of the neck, particularly after any effort, and very strongly evident for some time after an attack of dyspnœa; dulness on percussion over that part of the sternum; signs of congestion of the lungs, and from an early period difficulty of swallowing; the crowing sound is either entirely absent or very partial; the pulse is weak and intermittent; and there are copious perspirations over the head. These constitute a group of signs which enabled me to determine my case most clearly, and I have no doubt will afford unerring guidance to those who have never met the disease, in arriving at a correct diagnosis when any such arise in their practice.

ON A CASE OF FISTULA OF THE URETHRA.

By John Pattison, Esq., M.D.

M. I——, aged twenty-four, consulted me on Jan. 3, 1851, complaining of a muco-purulent discharge from the urethra. He had contracted gonorrhœa nine months previously, and the discharge since then has been constant. On examining the urethra with a bougie, I found a stricture in the membranous portion, and a sac or tumour in the portion about an inch below the corona glandis. This sac or tumour, when making water, became always more or less distended, and by pressure could be nearly emptied, a sanious muco-purulent discharge appearing at the urethral orifice.

I punctured the cyst, and threw an injection of tincture of iodine diluted with water into it daily, at the same time treating the stricture in the usual manner.—To the patient, who was of the scrofulous diathesis, I gave full doses of the iodide of potassium, and the fluid extract of sarsaparilla. This treatment, along with bandaging, was persevered in for some time, without any benefit to the urethral fistula. On Feb. 22, I operated for the cure of his fistulous opening in the following manner, being assisted by my pupil, Mr. Constantine M'Guire.

Having first introduced a full-sized silver sound into the urethra, I then, with a narrow sharp-pointed knife, laid open the sac, and then found three fistulous canals proceeding from the cyst, in a direction downwards towards the perinæum, to the extent of three-quarters of an inch, when all three united, becoming one canal, which took a direction immediately backwards, and opened into the urethra, by a single opening rather more than one line in diameter. The next step was carefully to excise my puncture of the sac, and the callous sides of the fistulous canals; I then, with a small cautery-iron, touched the opening in the urethra. For the first few days the cold-water dressing was used, and the bladder regularly emptied with the catheter. The after-dressing was the basilicon ointment, and now and then with a solution of nitrate of silver.

In the course of ten days all discharge from the urethra had ceased; the patient progressed favourably, and on March 16th he was discharged cured.

ON THE

USE OF THE VAPOUR-BATH FOR INVALIDS FROM INTERTROPICAL CLIMATES.

By I. Puddick, M.D., London.

It is a medical truth clearly established, that when once the body has been long accustomed to a stimulus of any kind, a repetition of the stimulus is necessary, if not to health, to that which is near akin to health—comfortable sensations. The sudden withdrawment of an accustomed stimulus it invariably followed by depression, mental and corporeal, constituting that assemblage of symptoms, which is designated by the term HYPOCHONDRIASIS. That mankind incur the penalty of hypochondriasism by habitual stimulation forms one of the most cogent arguments against the use of stimulants, even in moderation, of every kind, including those which act directly on the body and those which produce the same effect indirectly through the mind. This observation applies not only to the use of alcohol in its various forms of ardent spirits, wine, ale, &c., and to the whole class of narcotic stimulants, such as opium and tobacco, but also to indulgence in all the exciting passions.

It is curious that addiction to one kind of stimulant is rarely accompanied by addiction to another kind. The spirit-drinker is seldom an habitual smoker, snuffer, or chewer of tobacco, and the opium eat is not among the consumers of ardent spirits or tobacco; and, again, those persons who indulge in exciting passions are temperate in the use of spirituous and narcotic stimulants.*

But there is a class of hypochondriacs who suffer from the giving up of an accustomed stimulus, towards whom our sympathies are much more loudly called forth, since they are involuntary sufferers—the invalids who re-visit this country, returning home after a residence more or less protracted in an intertropical climate. The stimulant to which they have been habituated is *heat*. On their return to this climate, that stimulant being withdrawn, all the bodily functions are languidly and imperfectly performed; the respiration and circulation are feeble; digestion is slow; the liver, kidneys, and skin are torpid; the nervous system is depressed; and owing to the retention of excremental materials in the blood, the ordinary symptoms of hypochondriasis are developed. Tracing these symptoms to their origin, they are manifestly occasioned by the withdrawment of an accustomed stimulus. It is obvious that the sedative effect of *cold* is best counteracted by the stimulus of heat; according to the antihomœopathic axiom, *contraria contrariis curantur*.

For the cure of the congestive diseases of East and West Indian invalids, I have for nearly thirty years prescribed the use of the vapour-bath.

By the stimulus of heat, applied to the whole surface, and also inhaled at the same time, the head being included in the vapour-bath, an impulse is given to the respiration and circulation, the digestion is improved and the secretions increased.

In this way, the stimulus of heat, in the form of a

* We think this last statement is open to doubt.—Ed. L.

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heated atmosphere, saturated with moisture, and impregnated with the agreeable and exhilarating aroma of plants of the orders Verticillatæ, Coniferæ, and Icosandriæ, counteracts the sedative effects of cold.

The East and West Indian invalid thus re-visits, as it were, the climate of his accustomed stimulus, and obtains immediate relief from his morbid sensations; and this he does from time to time, till at length the body becomes re-adapted to its native climate.

Invalids of this class derive as much immediate benefit from the use of the vapour-bath as the spirit-drinker does from ardent spirits, the opium and tobacco smoker and chewer from the use of their pernicious drugs or the gamester from his cards and dice; with this great advantage, that the vapour-bath introduces no poisonous element into the body, nor does it occasion any *tædium vitæ*, as the consequence of its repetition.

The superiority of the vapour-bath, to the usual deobstruents, mercury, the mineral acids, and saline purgatives, in the treatment of the congestive diseases consequent on a residence in an intertropical climate, is evident, not only from the cause by which those diseases are produced, but also from the *modus operandi* of the remedy.

I conclude this brief recommendation of a really efficacious remedy to those in the profession who have practised in hot climates, and whose advice is sought by invalids who are suffering from a residence in those climates, with a quotation from Sydenham, slightly altered, to suit it to the case in point.

"The vapour-bath is certainly the best remedy for diseases engendered by cold after heat; and, indeed, I have often thought, that if a person were possessed of as effectual a remedy as the vapour-bath, for the cure of these and most other congestive diseases, and had the art likewise of concealing it, he might easily gain a considerable fortune."

ON THE ADMINISTRATION OF CALOMEL IN ABDOMINAL INFLAMMATION.

By Edward Williams, M.D.,
Resident Physician to the South-Eastern Lying in Hospital, Dublin.

I was lately called to a case of peritonitis, characterized by pain in the abdominal region, increased by pressure; pulse 140, and irritable, combined with pyrexia and a costive state of the bowels. The patient was a female who had been confined a few days before; she had taken some castor-oil in the morning to open her bowels. I ordered steeping with hot flannels and turpentine, and two grains of calomel and half a grain of opium every two hours. The next day I called, and was agreeably surprised, not expecting such rapid improvement. She had by this time taken twelve grains of calomel and three of opium; pulse reduced to 90, and compressible, with a total absence of irritability; abdominal tenderness removed, with hardly any remains of pyrexia; the bowels had been opened once by the castor oil, possibly aided by the calomel, which acts sometimes as a slight purgative, although restrained by opium. Her mouth was not the slightest affected by the mercury, which seemed to act specifically, although apparently not producing any action of its own, as maintained by the celebrated Hunter, which at the same time no doubt it did, although not apparent to the eye, unless we adopt the theory of the modern physiologists, who affirm that it acts on the nervous system. Many things which are not apparently easy of explanation at the same time are true; the wonders of the microscope, to the medical world, explain these facts, which are stubborn things, upon which theory builds her reputation. It appears to me that the opium may have had some effect in reducing the pulse, the steeping in relieving local inflammation; at any rate, the pair making both valuable adjuvants to the mercurial treatment.

ON THE DESTRUCTION OF THE DENTAL PULP BY THE HEAT OF ELECTRICITY.

By Thomas H. Harding, Esq.

It may be confidently stated, that a more rapid, certain, and safe method of destroying the sensitive pulp of a decayed tooth, than any with which dentists are already familiar, will be regarded as a great advantage by all engaged in the practice of dental surgery. Having read in your journal an abstract of a paper communicated to the Medico-Chirurgical Society by Mr. Marshall, giving an account of his method of employing the heat of electricity for the purpose of limited cauterization in surgical disease, and a subsequent report of several operations performed by him, it struck me that a platina wire, heated in the way he recommends, might be made available for the instantaneous destruction of an exposed tooth-pulp.

On communicating this idea to Mr. Marshall, I found that it had already occurred to himself, and had been mentioned by him as one obvious application of his method of operating with the electric heat. Moreover, his experience in the matter enabled him to suggest for the purpose a very simple and suitable apparatus, which is, in fact, a reduced copy of that which he had used so success-fully in other cases, and in which the cauterizing portion consists of a flattened *loop* of fine platina wire.

The apparatus as ultimately employed by me may be thus described:—The battery, which of course may vary according to the choice of the operator, but which it is so desirable to render as elegant and simple in arrangement as possible, is constructed on a plan similar to that of the larger battery now employed by Mr. Marshall, which I believe he shortly intends to describe. It consists of only two pairs of plates, contained in a single cell, and is set in action by one fluid—viz., dilute sulphuric acid. The terminal six inches of the poles, which are of copper wire, plated, are supported on an ebony or ivory handle, upon the side of which one of the poles is interrupted at a particular point. The extremities of the poles are connected by a piece of platina wire, one-hundredth of an inch thick and three-quarters of an inch long, which is bent into a *loop*. The sides of this loop are then brought parallel and nearly close to each other without touching, and it is thus introduced into the pulp cavity of the tooth to be operated on. By a slight pressure on one side of the handle, the interrupted pole is temporarily joined, and the platina wire immediately becomes brilliantly heated as it lies in contact with the tooth-pulp. Sometimes, however, I have found it desirable, in the first place, to complete the galvanic circuit, and thus heat the platina wire, before bringing it to bear upon the exposed pulp. The flexibility of the loop of wire enables the operator to bend it in any direction previously to use. In this way I have succeeded in rapidly destroying the pulps of decayed and condemned teeth and have proceeded, after a few minutes, to the operation of filling with gold or with Ash's metallic paste. I have also destroyed, with the greatest ease and rapidity, the pulps of incisor teeth, cut off for the purpose of being pivoted.

It is obvious that this method is applicable either for the simple cure of toothache, or as a preliminary step to the operation of filling. I am aware that there is nothing novel in the use of a hot wire for destroying the nerve of an aching tooth. The old village doctoress has long ago cured toothache by the thrust of a hot needle or pin, and dentists occasionally use a heated

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wire. But the difficulty has been felt of applying the wire easily, and at a duly elevated temperature. In the method just described, this is surely, readily, and instantaneously accomplished. The vitality of the tooth-pulp is thoroughly destroyed, and it is even so far consumed or carbonized that the operations of filling or pivoting may be at once proceeded with, instead of having to be delayed. Owing to the extreme fineness of the wire employed, the local heat, though intense, is very limited in its action, and with due care the tooth substance need not suffer any appreciable injury. It may also be remarked, that in operating on some teeth, I have found, by completing the galvanic circuit on approaching the tooth, that the light given out by the incandescent wire aids very remarkably in giving a perfect view of the exact point at which the tooth-pulp is exposed.

In conclusion, I can only say, I beg confidently to lay this method before the notice of the profession, as the most ingenious and simple contrivance yet invented for the object in view, and as one which I think will be very generally adopted. It will give me great pleasure to exhibit the apparatus and the mode of operating to any who are interested about it; and I may add that the apparatus itself will be constructed by Mr. Coxeter, of Grafton-street East.

ON WOORRARA POISON.

By A. Campbell, Esq., Surgeon Hp. 55th Regt.

Woorrara poison, used by the Indians of British Guiana, is a deadly inspissated preparation of a shrub or tree indigenous to Guiana, generally employed for the destruction of game, and procured with extreme difficulty from the aborigines, owing to religious scruples. In this poison the Indian dips his arrow-point, consisting of a small narrow spicula of hard wood, which, conscious of danger, he handles and carries with the utmost care. My experience of it has been by the "*surbx caul*," or Indian blow-pipe.* Experiments prove that the minutest particle of the poison absorbed or entering the circulation of blood instantly suspends the functions of the brain, and all consciousness and sensibility are lost. The functions of respiration cease, or are scarcely perceptible, but the heart continues to pulsate for a short time. If, however, artificial respiration be employed and continued for a time, so as to preserve the purity of the blood, the heart's action will continue, acquiring gradual force, the nervous system will recover its suspended functions, and life will be restored.

This remedy has, therefore, been proposed (I think justly,) as a last resort in tetanus, by inserting the poison in *the finger*, tying a ligature above the wound, so as to regulate its action and effect on the system.

THE PULSE AN IMPORTANT GUIDE IN THE TREATMENT OF DISEASE.

By Edward Williams, M.D., Dublin.

Resident Physician to the South-Eastern Lying-in Hospital, Dublin.

Few things are more true than the above statement. The pulse is certainly a valuable guide and assistant in forming a correct diagnosis of disease; a fickle and erring companion if taken alone, but of great value when combined with other symptoms. How often have I, in a hurry, and guided by general symptoms, laid down antiphlogistic treatment, when the pulse has at once convinced me of my error, inflammation being mistaken for irritation, and tonics and sedatives required, not lowering treatment. Young practitioners especially should well study the pulse, for, not being matured by experience, they will frequently fall into error from the similarity of inflammation and irritation. Fever and pain and depraved secretions are frequently met in both; but in one it is the fever of sympathy and nervous action, not capillary congestion. The pulse should be well studied—1st, in its natural or healthy state; 2ndly, in diseased states of the system; 3rdly, in especial cases: and 4thly, in the two sexes: also in the various stages of life, from the cradle to the grave.

It is only from a knowledge of these facts, that we can treat disease with any degree of skill. Without it, even taking the most favourable view of it, we should be often in the dark, for it is by a combination of symptoms or guides that we can form a correct diagnosis, not by one, two, or three symptoms; and that which when taken alone is of little value, is of great value when combined with other adjuvants.

* The Indian blow-pipe consists of a narrow, hollow tube, usually made of bamboo, six feet or upwards; into the distal orifice of this tube is introduced the small poisoned arrow; the inserted end sufficiently covered with cotton to render it air-tight. The aim taken, the mouth is applied to the near end, and the air forcibly propelled, which discharges the arrow, so as to wound an animate object at a distance of thirty yards.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

July—August.

Case of Popliteal Aneurism treated by Compression; with Remarks, and a List of the Cases treated in Dublin. By O'B. Bellingham, M.D., F.R.C.S.I., Surgeon to St. Vincent's Hospital, Dublin.

The subject of this case was a labourer, aged forty-two, who was admitted into St. Vincent's Hospital, under Mr. Bellingham's care, in November, 1850. The aneurism, which was of large size, was seated on the right side; had a strong, heaving impulse, and a short, harsh bruit was heard on auscultation over it. The treatment was commenced by placing the patient upon a very restricted diet, particularly as regards fluids, (six ounces only being allowed in the day, with eight ounces of solid food,) confining him strictly to the horizontal posture, with a dose of purgative medicine each night. Under this treatment, continued for some days, the pulse, from being hard and incomprehensible, became soft, small, and slow. Compression was commenced December 4th, at eleven A.M., by means of two instruments, one upon the artery where it crosses the ramus of the pubis, the other at the lower third of the thigh. At half-past eight P.M. the outlines of the aneurismal sac were more distinct; the patient's skin was cool, and he did not complain of pain. He remained awake during the night, and kept up the compression himself, the points upon which the pad of the instrument should rest having been marked with ink. Next morning, between nine and ten, on unscrewing the instrument, the pulsation of the aneurism was found to have ceased; the tumour was hard, solid, and circumscribed, and an enlarged collateral vessel was felt over the centre of the popliteal region. Moderate pressure was continued for some days; the patient was kept in bed, and the diet was gradually improved. The tumour diminished in size, and became harder, and when the patient returned home, the limb was as strong as the other, and his general health perfectly good.—Some remarks upon the treatment of aneurism by compression followed, in which the author contrasted the results of compression and the ligature, and pointed to the advantages likely to ensue from combining constitutional with local treatment. In a table appended to the paper, the author has given a list of all the cases of external aneurism treated by

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compression in Dublin during the last seven years, in which the seat of the disease is mentioned, the hospital or other locality where the treatment was conducted, the surgeon's name who had the management of the case, and the results are stated. Of the e, it appears that twenty-six were cases of popliteal aneurism, twenty-one of which were cured; six were cases of femoral aneurism, of which five were cured, the sixth having been a form of traumatic aneurism, in which amputation of the limb was the only resource. Three were cases of brachial aneurism, of which two were cured; in the other a high bifurcation of the brachial artery existed, and two vessels required to be tied. One was a case of radial aneurism, which was cured by compression. Of the remaining five cases of popliteal aneurism, amputation of the limb was performed in one, the patient recovering; in a second, the ligature was used with success; in a third, the patient was obliged to return to his employment before the cure of the disease; the aneurism diminished in size, and the patient continued to work for above three years afterwards, when symptoms of aortal aneurism supervened, under which he sank. In a fourth, the patient died of pulmonary disease, and the fifth patient, of a broken-down constitution, died of erysipelas.

ACCOUNT OF THE DISSECTION OF A CASE IN WHICH TWO POPLITEAL ANEURISMS HAD BEEN TREATED BY COMPRESSION OF THE FEMORAL ARTERIES. BY PRESCOTT HEWETT, Assistant-Surgeon to St. George's Hospital, &c.

A MAN, aged thirty-eight, was admitted into St. George's Hospital, in the middle of 1848, under Mr. Cutler, with an aneurismal tumour in each ham. That on the right side, completely filling this region, was compressible, but could not be emptied: that on the left, not larger than a small egg, was hard, and to a great degree apparently solid, and with much less pulsation. The tumour on the right side had only existed three months, and nothing had been done for it. From the account of the patient it appeared that the disease on the left side, which had begun about eighteen months back, had been treated by compression of the femoral artery, at the Wexford Infirmary, where the pressure had been kept up, more or less, for seventeen weeks, during which the limb had regained its natural size, and the tumour was reduced to its present state, from which it has never since varied, and has caused him but little inconvenience. His general health, which had begun to give way about two years and a half back, had prevented him from following his business of musical instrument maker. When admitted into the hospital, he was pallid and apparently suffering from great debility. At a consultation of the surgeons, it was determined, under existing circumstances, that compression should first be applied to the right femoral artery, and the instrument, a ring tourniquet, was so adapted as only to lessen the circulation in the limb, and to be worn for a few hours daily. In some little time the limb was reduced in size, and the tumour became smaller and firmer, but pulsation still remained. Some six weeks after his admission, and whilst under surgical treatment, cough and expectoration, with difficulty of breathing, made their appearance. Auscultation detected nothing abnormal about the heart, but the lungs were found to be engorged at the back part. The chest symptoms went on increasing in severity, and the patient one day suddenly brought up a large quantity of arterial blood, and died shortly afterwards. The tumour in the right ham had gone on decreasing in size, and had become firmer and more solid, but some pulsation was still felt. No change had occurred in the left ham.

At the examination of the body, which took place thirty-one hours after death, the left aneurismal tumour, deeply embedded in the popliteal space, was found lying between the joint and the artery, and of the size of an egg; it was pyriform in shape, and apparently quite solid, but on cutting into it the lower half only was filled with long-standing coagula; the upper part still presenting a cavity lined throughout by a perfectly smooth membrane continuous with the coat of the artery, merely contained some small recent clots. Of the two openings into the sac, the upper one was large, and nearly of the size of the artery; the lower one, on the contrary, was much contracted, and scarcely admitted a common-sized probe. The portion of the artery lying upon the sac was also very much contracted, but its coats were healthy, as well as those of the posterior and anterior tibial vessels, which were of their normal size. In the upper part of the popliteal, and in several parts of the femoral, there were large patches of atheroma, with three distinct aneurismal dilatations, one in the former vessel and two in the latter. The femoral artery and veins were pervious in their whole length, and the surrounding cellular tissue was not thickened. The vein and the nerve in the popliteal space were firmly adherent to the sac with a few of the fibres of the gastrocnemius muscle. The aneurism on the right side, larger than a cricket-ball, was also lying between the artery and the knee, to which it was firmly adherent. It was filled with laminated coagula, save at the back part, where there was still a small channel leading from the upper into the lower part of the vessel: this channel was rough throughout, and covered with recent fibrine. The upper opening of this channel was free and smooth; the lower one was small, and below it the artery was reduced to the size of the posterior tibial. Above the aneurism the coats of the artery were much thickened by atheroma, and here too, about an inch and a half above the tumour, was another small aneurismal dilatation. The femoral artery presented several patches of atheroma, but it was otherwise healthy, and, as well as the vein, pervious throughout its whole course: the surrounding cellular tissue was not thickened. With regard to the popliteal vein and nerve, the appearances were the same as those observed on the left side. The thoracic aorta was extensively affected with atheroma throughout a great part of its course, and it was somewhat dilated. In its arch, it presented three distinct aneurisms, one of which, the largest, was lying between the large vessels and the windpipe, into which it had burst by a small ulcerated opening, about an inch above the bronchi: the cavity of this sac was partly lined with long-standing coagula. The bronchi were filled with blood, in addition to which the lungs themselves presented several large patches of pulmonary apoplexy, and were extensively affected with emphysema. All the abdominal organs were healthy, excepting the kidneys, which were somewhat smaller than natural, rough on their surface, and with several small cysts in their structure.

A pause having ensued after the reading of the papers,

Mr. MACILWAIN rose and said that the papers were too important to be allowed to pass without discussion. He rose, however, more for the purpose of eliciting information than to impart it. He proceeded to speak on the subject of the treatment of aneurism generally, and said that we appeared to have stood still in the matter since the days of Hunter. Had Hunter lived, no doubt many of the inquiries into the pathology of aneurism since undertaken, would have occupied his attention, particularly the cause of the deposition in the artery and other points in connexion

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with the subject. Mr. Macilwain then proceeded to speak of the importance of having more accurate reports of the cases which were subjected to treatment, and expressed his opinion that we regarded the disease too distinctly as a local one.

Mr. Hodgson was obliged to Mr. Macilwain for the observations which he had made, but he thought that the discussion should be confined to the subject immediately under consideration, viz. the cure of aneurism by compression. The consideration of the morbid changes taking place in the vessels in aneurism might be well discussed on another occasion, but on the present we should limit ourselves to the points embraced in the papers just read. (Hear, hear.)

Mr. Partridge thought the most desirable plan to pursue in the discussion was for the surgeons who had had any experience of the treatment of aneurism by compression, to state the result. He was inclined to think that the London surgeons were open to the remark of Dr. Bellingham, of having neglected the plan under consideration. He (Mr. Partridge) could speak for King's College Hospital, that pressure had been but little employed in that institution, and the result was by no means encouraging. This was partly attributable to the imperfect instrument employed, and partly to the circumstance of the patients being entrusted a good deal with the treatment themselves. Thus, a stout healthy-looking man was admitted into the hospital with a popliteal aneurism, and the management of the instrument was mainly left to himself. He screwed up the instrument so tightly that it eventually broke, but not until a large slough formed on each side of the aneurism, which remained in the same state. A ligature was afterwards applied; the man lost his toes by gangrene, but the aneurism was cured. If he (Mr. Partridge) had such an instrument as that exhibited on the table he should use it, as it was a great improvement on the one usually employed in London. He inquired the experience of surgeons on the state of the artery after compression had been employed unsuccessfully; it having been urged by some that the artery, after the failure of compression, was not in so favourable a condition for the application of a ligature as before.

Mr. Quain said that Mr. Partridge's case could not be taken as the type of those he had seen. He had observed good results from the treatment by compression in a few cases of popliteal aneurism, and he was favourably disposed to that plan of treatment — He feared that a portion of the remarks in the paper first read were not calculated to conciliate support to the practice it advocated; he alluded to the remarks made in connexion with the statement that surgeons out of Dublin "decry" compression as a mode of treating aneurism. This statement, too, he believed to be erroneous, at least he had not heard anything that would bear it out. But the question really was not what is thought in Dublin, or in Edinburgh, or in London, but what was the fact as to the utility of compression in the management of the disease. While he listened to the paper he was struck by the circumstance that no mention was made of the treatment in question being resorted to in aneurisms, other than the popliteal and femoral. He (Mr. Quain) had seen the late Mr. Liston use compression of the brachial artery in a case of aneurism of the hand from injury. Though the compression was made under favourable circumstances, (for it was well applied, and the patient gave every aid to the surgeon,) still it entirely failed. The disease in this instance was cured by ligature of the brachial artery. In the operation, this artery was by no means so easily secured as it usually is, owing to the thickening of the cellular substance and fascia by the compression; but there was no such difficulty in the case as would justify, in his opinion, any opposition to the use of compression upon that ground. He thought at the time that the want of success in this instance might perhaps be attributable to the large nerve which courses over the brachial artery. The femoral artery, it will be remembered, has no nerve of magnitude in company with it. Dr. Bellingham, moreover, gave no account of the condition of the parts upon post-mortem examination after the successful application of compression, but Mr. Hewett had this evening given the history of such examination in one case. He himself had witnessed one dissection in which the femoral vein was found to be obliterated.

Mr. Partridge said that the statistics should state whether the patients were cured or not, and how long they had remained well. He thought that Dr. Bellingham was right in saying that in London we did not habitually employ pressure, and that there must be some reason for it.

Mr. Quain had seen compression employed successfully in cases of femoral and popliteal aneurism, but at the moment he did not recollect the number of cases.

Mr. Partridge suggested that Mr. Curling should state the experience of the London Hospital surgeons, and Mr. Cock that of the Guy's men, of compression.

Mr. Prescott Hewett differed with Mr. Partridge respecting the employment of compression by London surgeons; at all events he could speak for St. George's, for scarcely a case of aneurism was admitted into that institution in which compression was not at first resorted to. During the last three or four years there had been five cases of aneurism in the hospital, including the one detailed in the paper before the Society. Two of these were cases of popliteal aneurism, one of which was of very large size. In both cases compression was applied to the femoral artery, but in each instance, owing to some peculiarity in the patient, compression was discontinued, the artery was ligatured, and both cases did well. The instruments employed were not so clumsy as had been represented: in both cases compression was kept up by two tourniquets in two parts of the artery. The patients were under the care respectively of Mr. Cæsar Hawkins and Mr. H. C. Johnson. In neither of the cases did the effects of compression render the application of the ligature more difficult. The third case was one of diffuse aneurism of the ulnar artery, consequent upon a wound; in this case the tourniquet was applied over the brachial. He did not think that the failure in Mr. Liston's case of aneurism in the hand was attributable to the contiguity of the nerve to the brachial artery; for in the case in St. George's, the pressure was applied over the brachial, and the patient was cured in a fortnight. In the fourth case compression was tried, and acted apparently with good effect; but in two or three months the pulsation was again detected; the patient was unwilling to submit again to pressure; the artery was consequently ligatured, and a cure effected. The fifth case was the one related in the paper before the Society. In answer to Mr. Partridge respecting the influence of compression on the after operation of ligature, he might say, in the case operated on there was no thickening of the sheath surrounding the vessels.

Mr. Curling had no information to give on the subject, as he had had no case under his own care; but he had no disinclination to try compression when a suitable case presented itself. He was quite satisfied that it was a valuable plan of treatment, and thought the Society indebted to Dr. Bellingham for bringing it forward. He regretted, however, that Dr. Bellingham had not given more information as to how and where he applied pressure. The instrument on the

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table was not sufficiently known in London; his colleague, Mr. Ward, had to send to Dublin to procure one. He thought, in cases of compression on the femoral artery, obliteration of the vein, as in the case mentioned by Mr. Quain, might be avoided by having the pressure applied either just above or below Poupart's ligament. The instrument required management. Where did Dr. Bellingham apply pressure on the femoral artery? He thought Mr. Quain's observations respecting the brachial artery would be borne out by other cases. The pain would be very severe from pressure upon the nerve.

Mr. Macilwain having offered a few words of explanation, and declaring that he had no desire to offer any irrelevant remarks,

Mr. Cock rose and said he regretted that his experience of the employment of pressure was limited to two cases of popliteal aneurism. In these cases, the only reason he believed the plan did not succeed was, that the patients did not persevere in the employment of the means—one discontinuing it in four, the other in six days. There was no reason to doubt that if the patients had gone on they would have got well. The instruments employed in Guy's Hospital were by no means so perfect as the one on the table, and were more irksome. In each of the cases to which he had referred, the femoral artery was tied at the urgent request of the patient. Both patients got well; but in one case the operation was rendered somewhat more difficult from some thickening and inflammation of the sheath of the vessels. Beyond this the pressure had not interfered with the application of the ligature. He (Mr. Cock) had no doubt that the failure of the pressure in these cases, and the inability of the patients to bear it for any length of time, had arisen from the clumsy character of the instruments, and the bad manner in which they had been applied. The patients in these cases had not been sufficiently watched, and were seen only daily or every second day. Much more watching and care was required in the proper management of these cases than were usually bestowed on hospital patients, and to a neglect of these the failure in the cases he had related might fairly be attributed, as well also to the neglect of instructing the patient carefully in the mode of applying the pressure. He thought, however, that pressure in the treatment of aneurism would soon be much more extensively employed in London than it had been.

Mr. Athol Johnson said that three cases of aneurism which had been treated by pressure had been in St. George's Hospital during the period that he was house-surgeon to the institution. Two of these were cases of popliteal aneurism, in which pressure was applied over the femoral artery, but in so clumsy a manner, and with such clumsy instruments, that the plan failed in both cases. The vessels were afterwards tied, and the patients did well. The third case he believed was one of those mentioned by Mr. Hewett, of aneurism of the ulnar artery, in which judicious pressure, modified by a suggestion of his own, soon effected a cure

Mr. Hodgson hoped, if Dr. Bellingham were in the room, that he would give some further particulars of his mode of treatment. He thought the profession in England were much indebted to their Dublin brethren for the great attention they had bestowed on the treatment of aneurism by compression, and to the improved method they had carried out. They had developed the principle on which the practice was undertaken Three modes of treating aneurism by pressure had been resorted to. The first, that introduced by Bottani, consisted in bandaging up the limb to a point beyond the swelling, and thus compressing the vessel: some cures, but very rare, were effected by this mode. The second plan was the employment of severe pressure on the vessel, at a distance from the disease, so as to prevent entirely the flow of blood through the artery. This plan had been adopted by Mr. Frere, of Birmingham, and the pressure seemed to act on the artery as if it were ligatured. But this plan caused so much suffering that it could be borne in only a very few cases, and it was rarely successful. In the few cases in which he (Mr. Hodgson) had seen it attempted, the pressure could not be borne. It was reserved for the Dublin surgeons to resort to a moderate degree of pressure, long continued, for the cure of the disease. There was a great physiological principle involved in this plan of treatment. If moderate pressure were long continued, the stream of blood through the vessel became diminished, the vessel became constricted, the circulation through the sac became less, a deposition from the blood took place in it, and a cure was effected. In looking at Mr. Hewett's case, read before the Society, he (Mr. Hodgson) should consider it doubtful if the cure could be said to be permanent; for though the sac was partly filled with a coagulum, and the aperture diminished, there was still such a cavity left that it was likely that the aneurism might return if the circulation had been much disturbed. He would inquire if, in Dr. Bellingham's cases, there had been any secondary aneurism, and also the state of the vessel in those cases in which the patients had died of other diseases. We were not only indebted to the Dublin surgeons for the mode of compression which he had spoken of, but they had rendered compression much less irksome by the form of apparatus which they employed, and their substitution of an elastic material, like india-rubber, for an inelastic one. Another point alluded to was the application of pressure at two distinct points, so that pain and weariness might be prevented by changing the place of pressure. It had been said by some that compression was only applicable to the femoral artery; but he might observe, that if a ligature on the distal side of an aneurism might cure, there did not appear any good reason why pressure applied on the distal side also might not act effectively. If so, pressure might be applicable in cases in which it was impossible to apply it on the proximal side of the aneurism.

Dr. Bellingham was now called upon to reply, but spoke in so low and indistinct a tone as to be quite inaudible during most of his speech. We understood him to commence by thanking the Society for the manner in which they had received his paper; and he then referred to some casts on the table of a limb before and after pressure had been applied to it, to cure aneurism. He then mentioned some cases in which aneurism had been cured by compression: in one case, the aneurism, a popliteal one, was cured in twenty-four hours; but an aneurism of the opposite side presented itself, and took a much longer time to cure. The patient eventually died from aneurism of the descending aorta. The artery over which the pressure had been applied was found to be quite normal; the aneurism was obliterated; the vein was normal. In another case, in which pressure had been applied to the femoral artery for popliteal aneurism, galvanic punctures having been also employed, the patient had died, at the end of ten days, from erysipelas. The aneurism was found nearly filled by layers of fibrine; the artery under the seat of pressure was healthy. He had dissected a patient who had suffered from aneurism in both popliteal arteries. One of these was treated by compression; the other, by ligature. The latter returned at the end of three or four years; not so the former. The vein and artery were found healthy. It was difficult to apply pressure to the femoral artery, without involving the vein in the compression. In almost

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every case which he had treated by compression, the pressure had been made at two or more points. He begged to say, that his observations referred more to the Edinburgh surgeons than to those of London, on whom he had no wish to reflect. In the list of cases which had been alluded to in the reading of the paper, but had not been fully read, instances were recorded, in which the radial artery was the seat of aneurism, and which had been cured by pressure made on the brachial artery. After once more thanking the meeting, Dr. Bellingham sat down, amid much applause.

On some Secondary Physiological Effects produced by Atmospheric Electricity. By Professor C. F. Schonbein.

After referring to the more obvious effects of electricity upon the organs of sensation, and more especially those of smell and taste, and stating his belief that the peculiar odour observed when an electrical discharge takes place, or in the neighbourhood of points from which electricity is passing, is not due to the electricity itself, but caused by the presence of a peculiar matter which he has named ozone, the author proceeded to lay before us the opinions held respecting it—viz., that either pure or atmospheric oxygen, when exposed to the action of electricity, is transformed into this odoriferous body, which he was at first inclined to consider a peculiar peroxide of hydrogen, but which other eminent chemists believe to be merely an allotropic modification of oxygen. With reference to its exact composition he declines, however, to give a decided opinion. This body, whatever its actual nature may be, is a most powerful oxidizing agent; at ordinary temperatures, oxidizing silver, forming iodic acid from iodine, nitric acid from nitrogen; converting the acids ending in *ous* into those which end in *ic*, the salts which terminate in *ite* into those which end in *ate*; metallic sulphurets into sulphates. It decomposes the gaseous components of hydrogen, with sulphur, selenium, phosphorus, iodine, arsenic, and antimony, and exerts many other energetic chemical actions, both on organic and inorganic substances. It has a strong electro-motive power, similar to that of chlorine, bromine, and iodine; and lastly, it has certain physiological effects upon the animal system, similar to those of chlorine and bromine, acting powerfully as a poison, even in minute doses. Ozone is being constantly generated in the atmosphere by the electrical action going on. When in excess it has a sensible effect upon the mucous membranes of those exposed to its influence, and its presence is indicated by starch containing the iodide of potassium being turned blue. The author has availed himself of this fact in the construction of this ozonometer, which consists of a box containing test-paper thus prepared, and a chromatic scale. He believes that certain catarrhal affections are produced by the presence of ozone in the atmosphere, and he has availed himself of the assistance of medical friends in ascertaining the co-existence of unusual prevalence of catarrh with what he terms his *blue days*, and he suggests that more extended observations are desirable for this purpose. The author then referred to the existence of poisonous miasmata in the atmosphere, which are generated by certain "purely chemical, or physical, or physiologically chemical actions," which take place within the earth, or on its surface, in stagnant or running waters, or in the atmosphere itself. Of these poisonous gases or vapours, there are two sorts which are antagonistic to and destroy each other. Of the first class, sulphuretted, and perhaps phosphuretted, hydrogen, alone, are produced by natural causes, and these in such minute quantities that they do not, except in a few localities, exert any general influence upon animal life. Of the second gas, there is one, namely ozone, which exists in appreciable quantities in the atmosphere. But the abundant source of gaseous matters is that which the decomposition of vegetable and animal substances affords. Some of these are well known, such as carbonic acid and ammonia; others are of unknown chemical nature, and though the absolute quantity of such deleterious matters may be small in comparison to the immense volume of the atmosphere, their accumulation would render the air unfit for the support of animal life, unless some agent were at work to neutralize or decompose them. The author states, that the purification of the atmosphere which we attempt to effect on a small scale by chlorine fumigations, is accomplished in the great processes of nature by the agency of ozone, a task for which it is peculiarly fitted by its high oxidizing powers. He gives the details of some experiments upon air tainted by putrid flesh, which was purified by ozone disengaged by the action of moistened phosphorus. Ozone, which is formed in the atmosphere by the electrical discharges constantly going on, acts upon and decomposes the oxidizable miasmatic gaseous matters which contaminate it, and thus the atmosphere is preserved in a state fit for the support of animal life, and, at the same time, the ozone, which, if allowed to accumulate, would become deleterious, is in its turn neutralized or decomposed by the miasmata. During a thunderstorm large quantities of ozone are formed, and the author supposes that the unhealthy state of the atmosphere which exists in the hot season of the year may be caused by the accumulation of miasmata produced by animal decomposition; and that it is by the generation of ozone that thunderstorms purify the air. The author considers that there are probably certain states of the atmosphere in which the quantity of ozone does not bear a due proportion to the miasmata it has to act upon, and that under such circumstances it is that certain diseases—cholera, for instance—make their appearance. He is also of opinion, that in the winter there is more atmospheric ozone than in summer, and that the higher strata of the atmosphere contain more than the lower; and as the generation of some diseases, such as the yellow fever, appears to be connected with certain seasons and geographical positions, he thinks that by an extended series of observations it might be ascertained whether these diseases bear any relation to the ozoniferous state of that portion of the atmosphere where they happen to occur. The paper concludes with a reference to experiments which prove that ozone produced by the action of electricity or by the agency of phosphorus is identical.

On a New Method of Treating Certain Cases of Epiphora. By William Bowman, F.R.S.

This paper describes a new mode of treatment of those cases of epiphora which depend on a displacement of the puncta lacrymalia out of the course of the tears, or on an obstruction of the canaliculi between the punctum and caruncle, the inner extremity of the canals, together with the lacrymal sac and nasal duct, remaining healthy. The author describes the exact nature of these cases, and relates examples. The treatment which he has devised consists in slitting up the canal from the punctum on the conjunctival aspect, so as to carry backwards the orifice at which the tears are received on to the mucous membrane near the caruncle; and he finds that the tears are in fact taken up by the remaining portion of the canal, while the end towards the punctum is converted into a groove. For the cases of obstruction from injury or other cause, he suggests a modification of this operation, by which the canal between the obstruction and

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the sac may be slit up for some way, so as to receive the tears at a new opening. The cases to which these new operations are applicable, have been for the most part abandoned by surgeons as incurable.

DESCRIPTION OF AN OPERATION FOR THE RADICAL CURE OF OBSTINATE STRICTURE OF THE URETHRA. By Dr. NEVERMAUN of Mecklenburgh.

(Communicated by B. PHILLIPS, F.R.S.)

The author states that after having tried all methods of treating obstinate stricture, the operation with a trocar catheter appears to him the most rational. The patient is placed as for lithotomy, and the catheter introduced as far as the seat of obstruction. The operator introduces one or two fingers into the rectum as a guide to the instrument; he then grasps the handle of the instrument, whose point is exposed, with the right hand, and pushes it steadily and forcibly forwards in the axis of the pelvis towards the bladder. When the resistance is found to cease, the trocar is drawn out and the catheter is left in the canal. In four or six days it is replaced by an ordinary elastic catheter. The paper is accompanied by drawings of the instruments and a description of them.

CASE OF OBTURATOR OR THYROIDAL HERNIA SUCCESSFULLY RELIEVED BY OPERATION. By HENRY OBRE, formerly Assistant-surgeon to the St. Marylebone Infirmary.

(Communicated by PROFESSOR ERICHSEN.)

After commenting on the extreme rarity of this form of hernia, and stating that he had been unable to find any record of its having been detected and relieved by operation during life, the author relates a case in which he operated successfully. The patient, a female aged fifty-five, the mother of a large family, was seized with symptoms which led her medical attendant (Mr. Gardener) to believe that she was suffering from rupture. She denied that this was the case, and a careful examination convinced Mr. Gardener that there was no hernia in the usual situations of that disorder. A little below the femoral region on the right side, however, he detected a degree of hardness resembling a small gland, and deeply seated; with some general fulness about the part. The author saw this patient on the fourth day after the symptoms had begun; at this time, she was suffering extreme abdominal pain in the umbilical region; during the previous twelve hours, her vomiting had been stercoraceous and incessant; the countenance pale and contracted; voice faltering; pulse weak, small, and intermitting—in short, all the symptoms of pending dissolution from strangulated intestine were present. On careful examination, nothing could be detected but a slight degree of fulness in Scarpa's triangle on the right side; that on the opposite side being well marked; on using firm pressure with the ends of the fingers over the neighbourhood of the femoral artery, and a little below the saphenous opening, a distinct hardness was to be felt, slight in extent, but giving the impression as if the sheath of the vessels was being pressed on. The state of the patient was such as to induce the author to propose to make an incision into the upper part of the thigh, down to the hard structure, in the hope that he might find confined intestine low in the femoral canal. He made a straight incision into Scarpa's triangle, as in the operation for tying the common femoral artery; beginning about three inches below Poupart's ligament.—When the cribriform fascia was opened, and the saphenous opening exposed, no hernial sac was found, but the hardened structure could be felt lying deep to the inside of this opening. The dissection was with some difficulty continued downwards; the fascia lata was divided, and the pectinæus muscle exposed. The fibres of this muscle were divided transversely for about an inch and a half or two inches, and a hernial sac was exposed, which rose up into the wound to the size of a pigeon's egg. The finger being passed along the sac, entered the obturator opening. The sac was opened, and the intestine was found to be a portion of the small gut, blue and congested. The opening through which it passed did not tightly enclose its neck, but it was considered prudent slightly to divide the edge. In doing this the saphena vein was wounded, and it was necessary to apply a ligature to its upper part. This was the only ligature required. After the operation, no medicine was given; in the course of the day the bowels acted three times, and in the course of a few days the patient had quite recovered.

SOME OBSERVATIONS ON THE PATHOLOGY OF THOSE AFFECTIONS OF THE EAR WHICH PRODUCE DISEASE IN THE BRAIN. By JOSEPH TOYNBEE, F.R.S., Fellow of the Royal College of Surgeons in England Aural Surgeon to St. Mary's Hospital, and Consulting Surgeon to the St. George's and St. James's General Dispensary

In this communication the author has a two-fold object: the first is to point out the nature of the several affections of the ear which produce disease in the brain; the second to show that each of the cavities of the ear has its particular division of the encephalon, to which it communicates disease. Thus, that—

1. Affections of the external meatus and mastoid cells produce disease in the lateral sinus and cerebellum.

2. Affections of the tympanic cavity produce disease in the cerebrum.

3. Affections of the vestibule and cochlea produce disease in the medulla oblongata.

1. In speaking of the external meatus, its intimate relations with the lateral sinus and cerebellum are pointed out; the affection most frequently producing disease in these parts is shown to be catarrhal inflammation of its dermoid layer, one of the numerous diseases which have hitherto been classed together under the term otorrhœa. This affection of the external meatus is fully described; and it is shown that it is found to endure during many years, without the presence of pain, or any other symptom calculated to apprize the surgeon of the presence of a formidable disease, while the bone may be becoming slowly carious, and portions of the dura mater and cerebellum disorganized.

In the second division of the paper, the tympanic cavity is described to be the part of the ear from which disease is most frequently propagated to the brain. The circumstance is accounted for, firstly, by the great liability of the mucous membrane of the tympanum to undergo pathological changes; and, secondly, by the existence of very intimate relations between this membrane and the dura mater. The affection of the tympanum which most frequently produces disease in the cerebrum is chronic catarrhal inflammation of the mucous membrane, an affection thus far only known as an otorrhœa. The four changes in the dura mater and cerebrum produced by the affections of the tympanum are—

1. Inflammation of the dura mater, and its separation from the surface of the petrous bone by serum.

2. Ulceration of the dura mater, and its complete detachment from the petrous bone.

3. An abscess in the substance of the cerebrum.

4. Undefined suppuration of the substance of the cerebrum.

From a careful examination of cases, it appears that chronic catarrhal inflammation of the mucous mem-

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brane of the tympanum may exist as many as twenty or more years, without the production of any disease beyond it, or at least without the existence of symptoms by means of which the presence of such disease can be diagnosed; nevertheless, in the great majority of cases, vital structures become sensibly affected in a much shorter period.

The third section of the paper is devoted to the consideration of the labyrinth, and it is shown that purulent matter in the vestibule or cochlea, sometimes causes diseases of the auditory nerve, which is transmitted to the medulla oblongata, producing suppurative inflammation of the meninges, and death, without the presence of any caries of the bone.

In the course of this paper, the author shows the necessity of abolishing the use of the term otorrhœa, and of using in its place the names of the several diseases, eight in number, of which a discharge from the ear is one of the symptoms. In conclusion, the facts which he is desirous of impressing upon the minds of medical men are, that the bone, dura mater, and substance of the brain may be slowly undergoing disorganization, without the presence of any other symptoms calculated to reveal to the medical man the existence of formidable disease, than the presence of a discharge from the external auditory meatus; and that consequently no person suffering from catarrhal inflammation of the dermoid layer of the meatus, the membrana tympani, or of the mucous membrane of the tympanum, can be assured that disease is not being prolonged to the temporal bone, the brain, and its membranes: and that any ordinary exciting cause as an attack of fever or influenza, a blow on the head, &c., may not induce the appearance of acute symptoms, which, as a general rule, are speedily fatal.—Appended to the paper are tables, giving the particulars of sixty-five cases of disease extending from the ear to the brain, in which tables the duration of the chronic and acute symptoms, and the post-mortem appearances, are concisely detailed.

Case of Ovariotomy Successfully Performed. By John Beale, M.R.C.S.

[Communicated by John Dalrymple, F.R.S.]

In the early part of September, 1850, the author was consulted by a woman, aged thirty, unmarried, for an enlargement of her abdomen, which she had first noticed on the left side in the previous December. Latterly she had suffered from loss of appetite, loss of strength, and wasting of the legs and arms. The author found an ovarian tumour, hard to the touch, in the left iliac region and left hypochondrium, but soft and fluctuating on the opposite side, evidently in two distinct sacs, moveable, and free from tenderness; and he was induced to recommend its removal. The operation was performed on the 4th of December, under the influence of chloroform. The incision was ten inches in length, extending from the scrobiculus to the pubes. Two cysts were punctured, and their contents removed, before the tumour could be removed from its cavity; the pedicle was tied by means of a double ligature passed through its base, and the tumour was then separated as near as possible to it.—The uterus and right ovary were healthy. Everything went on favourably after the operation. On the 15th she was able to walk about the room. On the 25th the ligature came away. The tumour was three feet two inches in its largest circumference, and two feet one and a half inch in its smallest; it weighed twenty-five pounds: it was multilocular, marked on the surface by bands of white fibrous tissue corresponding with the septa of the cysts. The author then gives a description of the walls of the cysts. The cysts varied very much in size, and in the density and tenacity of their contents; in the smaller ones the fluid was clearer and thinner. The average specific gravity was 1010, but the fluid contained a very large quantity of albumen. The total quantity of fluid was from twenty-one to twenty-three pints.

Account of a Case in which a Large Cyst, containing Hydatids, was developed at the Root of the Neck; Death ensuing from Rupture of the Left Subclavian Artery. By James Dixon, Surgeon to the Royal London Ophthalmic Hospital, and Assistant-Surgeon to St. Thomas's Hospital.

John M——, aged twenty-four, a waterman, was admitted into St. Thomas's Hospital, Jan. 14th, 1851. Nine years previously a swelling formed above the left clavicle, which slowly increased, accompanied with occasional numbness in the left arm. At a later period there was total cessation of the pulse at the left wrist. The swelling was fixed, and seemed to rise up from about the situation of the first rib, having in front the sterno-mastoid muscle and the carotid sheath. The larynx was pushed a little towards the right side, and the patient's voice had latterly become hoarse and weak. No bellows' sound or aneurismal impulse could be detected in the swelling, nor was there any abnormal sound of the heart. A very indistinct fluctuation was to be felt in the swelling, about an inch above the top of the sternum, between the inner edge of the sterno-cleido-mastoid muscle and the common carotid artery, which had been thrust inwards, so as to lie on the median plane. A fine trocar was passed in at this fluctuating spot, directly backwards, and only about a drachm of clear colourless fluid evacuated. Some weeks later an incision was made on a line nearly corresponding to the interval between the sternal and clavicular portions of the sterno-cleido-mastoid muscle, but commencing an inch above the top of the sternum. The fibres of the above-named muscle having been carefully separated, and afterwards those of the sterno-thyroideus, a fascia-like membrane was exposed. A trocar, passed through this, let out a few drops of clear fluid, such as had formerly been found. The opening in the sac was then enlarged in a direction towards the angle of the jaw, and a small collapsed hydatid immediately escaped. The finger being passed into the opening, entered a large sac crowded with hydatids of various sizes; several as big as hen's eggs were broken by pressing them against the edge of the first rib, the empty skins escaping by the wound. The wound was enlarged a few lines in an upward direction, and in doing this a slight amount of arterial bleeding occurred, which was arrested by pressure at the upper angle of the wound, and a compress was afterwards applied for some hours. The pulsation of the left radial artery was distinctly to be felt as soon as the patient had rallied from the faintness induced by the operation. The next day a poultice was applied to the wound, and the day following several whole hydatids, and many fragments of broken ones, passed out; others continued to escape from time to time, together with copious fœtid discharge. The opening made in the sac was kept from closing by passing the tip of the finger just into the orifice every second or third day, and it is singular that when the aperture had contracted so much as barely to allow of this being done, one hydatid, the size of a hen's egg, passed out entire. The patient went on well, the discharge diminishing, and no hydatids having appeared for several days, up to the 27th, (the nineteenth day after the operation,) when profuse bleeding suddenly occurred from the wound, preceded by a peculiar sense of weight, which the patient referred to the left side of the sternum. Pressure was applied, and afterwards a bladder of ice

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laid on the part, the patient being constantly watched. A second jet of blood took place fourteen hours after the occurrence of the first, a large hydatid having been voided in the interval without any hæmorrhage occurring at the time. A broad strip of sloughy, fascia-like membrane came away when the blood escaped from the sac. On the 28th, bleeding came on again; and as it seemed just possible that it might be owing to some partially divided artery near to the opening in the sac, an exploration was made by enlarging the skin wound and dividing the whole of the sterno-mastoid muscle. To lay open the sac, which was filled with blood, seemed out of the question.—The patient died on the morning of the 29th. A careful dissection was made of the morbid parts (they were exhibited to the society.) The sac in which the hydatids had been developed, when cleared of clots, was found to be of a fascia-like texture, and lined with shreds of sloughy fibrin. It reached, vertically, from the left side of the third cervical vertebra to the convexity of the aortic arch and apex of the left lung; and, sideways, from the middle line of the vertebral column to the scaleni muscles. Nearly the left half of the bodies of the fifth, sixth, and seventh cervical vertebræ, and of the second dorsal, had been absorbed; as also the head and neck of the first and second ribs. On examining the interior of the sac the source of hæmorrhage was discovered. The left subclavian artery was laid bare at about three quarters of an inch from its origin, and, at this spot, presented a rent in its coats rather more than half an inch in length.—The long-continued pressure to which the artery had been subjected between the hydatid sac and the border of the first rib, had caused total obliteration of the calibre of the vessel to an extent of about half an inch; external to the scaleni it regained its natural dimensions. The left lung was crepitant throughout.—There was a small patch of quite recent fibrin on the outer side of the middle lobe, and a few slender bands of the deposit passed from the lung to the adjacent costal pleura; but there were no traces of old pleuritis. The head and abdomen could not be inspected. A single collapsed hydatid was found remaining in the sac. Those hydatids which, during the progress of the case, had escaped entire, were carefully examined with the microscope. In several of the size of pigeons' eggs, clusters of echinococcus were found in various stages of development; but neither in the largest, which was equal in bulk to a hen's egg, nor in those about the size of peas, could any of these bodies be discovered.

A Statistical Report upon Disease of the Heart, derived from a Consideration of all the Cases admitted into St. George's Hospital during the last two years and a half. By Dr. Barclay.

Rheumatism is first considered as one of its causes. Divided into two nearly equal classes—those really inflammatory or acute, and those less so, or sub-acute,—the former class is found to contain sixty-seven cases with cardiac lesion, sixty-four without, and twenty-one doubtful. Endocardial murmur is found not to be certain evidence of disease, even in the most acute cases. Females are slightly more liable to acute rheumatism than males, but less liable to a recurrence of the disease. Females are more decidedly liable in a larger proportion to cardiac complication, and this is especially proved by the existence of friction-sound in the proportion of three females to two males. Cardiac complication exists eighteen or twenty per cent. more frequently in subsequent attacks than in primary ones. It is in the proportion of three to two of all the cases up to the age of twenty-five, and falls very rapidly after that age. The cases of sub-acute and chronic rheumatism furnish no examples of recent inflammation of the heart, but a considerable number of cases of old disease. So far as could be ascertained, these were almost all traceable to previous acute attacks, and were only about one-third of the cases which had previously suffered from acute rheumatism. The post-mortem appearances of recent inflammation are found associated with acute rheumatism, with disease of the kidney, with inflammation of the peritonæum and pleura, and with old disease of the heart, especially when hypertrophy existed, and with turbulent action during life. The cases of old disease of the heart are divided into sixty-one rheumatic, seventy non-rheumatic, and sixty-nine doubtful. They show a very considerable preponderance of males, especially among fatal cases. Up to the age of twenty, almost the whole, and even as far as thirty, more than half the cases, are associated with acute rheumatism. In the next twenty years, the non-rheumatic almost double the rheumatic cases, and after fifty, there are scarcely any derivable from rheumatism at all. The duration of rheumatic cases, dating from the first attack of acute rheumatism to death, is generally much longer for females than for males, varying in the latter from four to six years; in the former, from twelve to sixteen years. Four out of seven fatal cases of acute rheumatism, and twelve out of eighteen of older standing, are associated with pericarditis, which is always severe and extensive; but universal adhesion is neither the constant nor even the common result of rheumatic pericarditis, and it exists in cases where the previous existence of rheumatism is altogether denied. In valvular disease there are eighteen rheumatic cases, twenty-three non-rheumatic, and twelve doubtful.—The recent cases are all examples of inflammation of the mitral. When old and recent disease exist together, and when old disease is seen in different stages, the mitral valve generally appears to have been first attacked, and the aortic secondarily; and hence the preponderance of double valvular lesion in rheumatic cases seems to be due to renewed inflammations at distinct periods. Inflammatory thickening occurs also in several cases in which there had been no rheumatism. Disease of the kidney is associated with two cases of simple recent fibrinous deposit on the valves, and three of recent pericarditis, in which no other cause was known to have been in operation. It seems questionable how far this can be taken as a cause of great thickening of the valves, or of an adherent pericardium. Disease of each set of valves seems to produce, in nearly equal proportions, hypertrophy and dilatation, but aortic regurgitation especially the latter; atheroma of the aorta, more commonly hypertrophy; adhesion of the pericardium, chiefly dilatation. Disease of the kidney is associated with an immense majority of the cases of hypertrophy, and similarly of all the cases of disease of the kidney; more than a third presented on post-mortem examination more or less of hypertrophy of the heart. A table is appended, in which the post-mortem appearances are arranged, of all the cases in which clinical history threw any light on the disease of the heart found after death.

Case of Epilepsy treated by Tracheotomy. By W. H. Cane, Esq., Uxbridge.

[Communicated, with Observations, by Marshall Hall, M.D., F.R.S., etc.]

Dr. Marshall Hall had suggested on several occasions, and especially in a conversation with Mr. Cane, that as the attack of epileptic or other *convulsion* implied closure of the larynx with expiratory efforts, the attack of convulsive epilepsy would be prevented by tracheotomy. Mr. Cane was summoned, on Feb. 1, 1851, to the case of a boatman, aged twenty-four,

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who had become subject to violent fits of epilepsy, one of which had just occurred in so extreme a form as to leave him in a state of deep apoplectic coma and asphyxia, inspiration being performed only "by seldom and short catches, whilst the veins of the head and neck were everywhere visible and greatly distended." This state had continued nineteen hours. "Feeling convinced," Mr. Cane observes, "that the patient must shortly expire, and that the root of the evil was in the closure of the larynx, I at once proceeded to open the trachea, a matter of no small difficulty, on account of the twisted state of the neck, the engorged state of the vessels, and the constant action of the muscles. The operation of tracheotomy was performed, and the tracheal tube is kept in the trachea to the present time. The relief to the patient was immediate; the air passed into the lungs, the state of spasm subsided, with the turgid condition of the head and neck, and the patient soon recovered his sensibility. This was not the only gratifying result: although the poor man had experienced his epileptic seizures in increasing violence during seven or eight years, and recently thrice a week, he had, on April 1st, during two months, had no return of them. More recent accounts of the patient, who is now in Staffordshire, confirm the former report; the tube is still kept in the trachea, and the epileptic seizures have not recurred.

CASE OF ORGANIZED POLYPUS OF THE HEART. By THOMAS BELL ELCOCK FLETCHER, M.D., Physician to the General Hospital, Birmingham.

The patient in whom this morbid appearance was formed was a female, thirty-four years old, admitted under the author's care, at the General Dispensary, in October, 1842, with symptoms of heart disease of some years' duration. She had had rheumatism when eight years old, and her health had since been always feeble. Examination of the chest showed that there was considerable enlargement of the heart, and its action was violent; its beat was audible at some distance from the patient. The first sound was prolonged, but of a sharp tone, and was heard most intensely at the level, and two inches to the left side, of the left nipple. There was dulness on percussion, and bronchial respiration at the base of the left lung anteriorly; elsewhere respiration was natural. The liver appeared to be enlarged. The patient was relieved by elaterium, in various combinations, and afterwards took steel and digitalis with advantage, and in a month was dismissed from her attendance at the dispensary. Early in December she relapsed, and died in the course of a few days. The sound of the heart for the last few days was audible at four yards distance; her friends stated they could hear it in the room below. It appeared to the author to be superficial, inducing the belief that it depended upon the doubling of an adhesion of the pericardium. After death, fluid was found in the right pleura, and in each lung a patch of hæmorrhagic deposit. No adhesions of the pericardium existed. There was considerable dilatation of all the cavities of the heart, especially on the right side. The foramen ovale admitted the point of the little finger, and about half an inch below its orifice in the left auricle, there was attached, by a narrow pedicle, a polypus, two inches long and three in circumference, which projected through the mitral orifice into the left ventricle. This polypus appeared to be covered by a membrane continuous with the endocardium, and had a cavity in its centre, the size of a small nut, containing bloody serum.

REMARKS ON A PECULIAR APPEARANCE OBSERVED IN THE GUMS OF CONSUMPTIVE PATIENTS. By THEOPHILUS THOMPSON, M.D., F.R.S., Physician to the Hospital for Consumption, &c.

The author, after glancing at the risk of allowing the study of auscultation to supersede attention to general symptoms, refers to the discovery, communicated to the Society by the late Dr. Burton, of a blue line at the edge of the gums, as indicative of the presence of lead, and thence derives an encouragement to the examination of this part of the system, when there is reason to suspect any poisoned or morbid condition of the blood. He then presents the results of his observations in reference to this inquiry in cases of consumption, and avows his conviction of the frequent existence, in phthisical subjects of a mark at the reflected edge of the gums, deeper in colour than the abjoining surface; in some patients a mere streak on a raised border, in others, a margin more than a line in breadth, of a vermilion tint, inclining to lake: the mark being most distinct around the lower incisors, but usually observable in both jaws, and often around the molar, but modified in its situation by the form of the mouth. The author has examined some hundred cases in the course of the investigation, and gives the analysis of 102, of whom he has full records. In forty of forty-eight women the gingival margin is present: and in fifty-four phthisical men, although in a few the line is so faint as to be open to question, there is only one in whom it can be considered decidedly absent. He has reasons for suspecting that the same condition of the system which produces this state of the gums tends also to produce clubbing of the fingers; but he considers that the change in the extremity of the fingers rarely occurs till some time after the streak is manifest in the gums. Of seventy-six patients, forty-five were found to have clubbed fingers: of these forty-five only one had gums free from the characteristic margin; yet twenty of the seventy-six had marginated gums, but no expansion of the extremities of the fingers. The author discusses the effect of various modifying influences, such as hereditary tendency, catamenial disturbances, and habits as respects cleanliness, but cannot connect the presence of the symptoms in question with any of these circumstances; but he is of opinion that causes which irritate the mucous membrane tend to accelerate and increase the manifestation of the margin. He suggests this as an explanation of the more frequent absence of the line in women than in men, and dwells on its practical importance, as indicating, in such cases, the use of refrigerants, as preliminary to the introduction of tonic remedies. The author canvasses the question whether a similar line exists in any other disease; he allows that M. Fredericq may be correct in the opinion that certain changes in the gums occur towards the close of various chronic diseases, but he has never yet observed the peculiar margin described in this communication, without detecting other indications of consumption, although frequently only incipient. As respects prognosis in phthisis, he proposes the general rule, that cases in which the streak is observed early, or is broad or deep-coloured, tend to proceed more rapidly than those in which it is absent or slight; whilst freedom from the streak, even in the third stage, affords encouragement in treatment. In reference to diagnosis, the author believes,—1st. That the absence of the streak in men affected with inconclusive symptoms of phthisis, may incline us to a favourable interpretation of any such suspicious indications; but that in women, rather less weight is to be attributed to this negative sign. 2nd. That the presence of the sign in women is almost conclusive evidence of the presence of the tubercular element in the blood. The paper concludes with the remark, that the symptom therein described is one of many

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proofs that consumption is *not* exclusively a local disease, but rather a constitutional condition, requiring for its elucidation and treatment far more than an acquaintance, however exact, with the phenomena of auscultation.

A Case of Obstruction of the Colon relieved by an Operation performed at the Groin. By James Luke, Senior Surgeon to the London and St. Luke's Hospitals, &c.

(Communicated by James Moncrief Arnott.)

The subject of this report was a man aged sixty, who on Dec. 16, 1850, first complained to the author of feeling generally unwell. He had no pain, but his countenance was depressed, his eyes sallow, and his tongue coated. The bowels were confined, and lately medicines had acted with difficulty on them. An aperient was ordered, and on the following day he passed a small lumpy motion, but without relief to the symptoms; castor-oil was ordered, but after a time was rejected by vomiting. On the 18th there was no relief from the bowels and he vomited everything he took. From this time he progressively got worse in spite of all the means resorted to for his relief. He complained of pain chiefly about the region of the cæcum. The transverse arch of the colon could be felt distended and tympanitic. A careful observation of the case had led the author to believe that there was obstruction in the bowel about the sigmoid flexure of the colon, and it was resolved as a last resource to operate upon the patient. The operation was performed on the 23rd. Not thinking it prudent to assume that the conclusion respecting the seat of the obstruction was certainly correct, the author determined to adopt that operation which would give him some opportunity of extending his search, provided he did not find the obstruction at the point where it was supposed to be. He therefore opened the abdominal parietes near the groin, by an incision four inches in length, a little to the outside of the course of the epigastric artery, the lower extremity of which incision terminated a little above Poupart's ligament. The peritonæum was opened to the extent of about two inches. On passing the finger down the surface of the intestine, which now protruded, a diseased mass could be felt, which appeared to encircle the intestines. The bowel was then opened above this part: a large quantity of fæculent matter came away and the patient expressed himself as relieved. On now passing the finger into the bowel it was found to be impervious about two inches below the aperture. After the operation the recovery of the patient was rapid. On the 2nd day, fæces passed per anum, and continued to do so for more than a month, when their passage through the natural opening ceased; it was again partially restored, but from this time the greater part of the fæces passed by the wound. This is closed by a well fitted pad, and he has been enabled since to pursue his ordinary occupation almost without interruption. The author then proceeds to remark on the danger of protracted delay in attempting to relieve such cases, a delay which is, however, to a great extent rendered necessary by the difficulties of diagnosis. The distention of the colon, and the evidence afforded by the proper introduction of the long tube, are pointed out as the two means of diagnosis on which reliance may be generally placed for the purpose of determining the seat of obstruction, when it is situated at the lower part of the colon. The advantages of the operations of Amussat and Littre are then compared, and the author, while admitting the advantage gained by operating in the loins, as proposed by the former—of not opening the peritonæal cavity—yet thinks that the operation in the groin offers certain advantages which render it in many cases preferable. By the operation in the loins nothing more could be done than opening the intestine; but this might in some cases be improper—as where obstructions were produced by fibrous bands overlaying the intestine, or by strangulations, the result of causes acting exteriorly to its tunics. In these cases, the proper treatment is to divide the bands, or relieve the cause of strangulation. In the event, too, of an error of diagnosis, the opening in the loins does not provide any facilities for correcting the error. The danger of total failure of affording relief consequent upon this state of things, must therefore be attributable as a demerit to the operation in the loins. There are, besides the minor evils in this operation, that the opening cannot be conveniently attended to by the patient himself, and that there exists frequently a great disposition to contraction, arising from the great depth of the wound, which requires renewed surgical interference. In all these particulars, with the exception of the necessary attendant of peritonæal section, the operation of opening the abdominal parietes at the groin, in all cases of obstruction, or suspected obstruction, in the lower part of the colon, appears to the author to be the operation which should be preferred. It affords facilities for modifying the treatment, either by opening the intestine, when incapable of relief by other means, or by dividing or removing any existing cause of strangulation. It enables the surgeon to extend his search within a limited range, in the event of the diagnosis proving incorrect; it allows him to open the bowel as close as possible to the seat of obstruction; and it secures to the patient the facilities for attending to his own comfort which appear almost a necessary condition to make life endurable under such circumstances.

Abstract of a Paper on the Variations of the Sulphates and Phosphates excreted in Acute Chorea, Delirium Tremens, and Inflammation of the Brain. By H. Bence Jones, M.D.

Having determined the variations of the sulphates in the states of health when different diets, amount of exercise, and medicines were taken, the variations of the sulphates in disease were examined. At the same time the total amount of alkaline and earthy phosphates was determined, partly in order to see whether the amount of sulphates and of phosphates bore any relation to one another, and partly to test the conclusions which were drawn in the author's previous paper on the Variations of the Phosphates in Diseases. The cases were thus classified:—

1st. Acute and chronic diseases, in which the muscular structures were chiefly affected, as chorea.

2nd. Functional diseases of the brain, as delirium tremens.

3rd. Acute inflammatory diseases of the nervous structures, as inflammation of the brain.

4th. Chronic diseases of the nervous structures.

5th. Acute diseases, in which neither the nervous nor the muscular structures were chiefly affected.

6th. Chronic diseases, in which neither the muscular nor the nervous structures were chiefly affected.

The three last classes gave only negative results.

In illustration of the first class, three cases of most intense chorea are detailed; the urine was examined frequently from the third to the eleventh day. The phosphates were found to be diminished. The sulphates were present in very great excess. The urine was found to be so loaded with urea, that nitrate of urea crystallized out before the urine was concentrated. The specific gravity of the urine was as high as 1036 in one case, 1035 in another, and in the third, 1031.

In illustration of the second class, three cases of delirium tremens are given. The urine was examined from the fifth to the fourteenth day of disease. The

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phosphates were not found to be so remarkably diminished as in the cases reported in the previous paper. The sulphates were found to be exceeding increased. The amount of urea was so great, that nitric acid caused an instantaneous crystallization. The specific gravity also was in one case, 1041; in another, 1037; and in the third, 1027. In other words, there was the most remarkable correspondence between the state of the urine in acute chorea and in delirium tremens.

In illustration of the third class, four cases of acute inflammation of the brain are given. The urine was examined from the fourth to the twenty-sixth day. Though the inflammation in these cases was not so intense as in those which were recorded in the author's previous paper referred to, yet they confirm the statement that in inflammation of the brain the phosphates in the urine are increased; they also lead to the conclusion that the sulphates are at the same time increased in the same degree.

In conclusion, the author states, the phenomenon common to acute chorea and to intense delirium tremens is increased and unceasing muscular action. The muscles are highly complex organic compounds, in which sulphur exists in an unoxidized state, and the muscular action is accompanied, if not caused, by an action of oxygen, which, among other results, gives rise to the formation of sulphuric acid and urea, the amount of oxidation being proportioned to the intensity of the muscular action. The result produced is an increase of the sulphates and of the urea in the urine, just as in health they would be increased if continued strong exercise were taken. The increased amount of urea does not constitute a disease resembling diabetes, but it is only an evidence of the changes which are taking place within. The increase of sulphates and phosphates in inflammation of the brain is also an evidence of increased oxidation of the nervous structures. These simultaneous variations depend on the fact that the amount of sulphur in the brain is nearly the same as the amount of phosphorus. Thus at one time we have evidence of increased oxidation of the elements of the nervous structures, and at another time increased oxidation of the elements of the muscular structures; and we may thus arrive at the conclusion, that at one time the function of the nerves and at another that of the muscles, is inordinately increased.

EPIDEMIOLOGICAL SOCIETY.

MONDAY, JULY 7TH, 1851.

MR. HUNT read a paper on

THE USES AND LIMITS OF STATISTICAL SCIENCE AS APPLIED TO THE STUDY OF EPIDEMICS.

The object of the author was to point out the adaptation of statistics to the purposes of the Society, as one of those modes of investigation by which the misleading influence of false or deficient evidence may be best avoided. As an illustration of the fallacy of such evidence, Mr. Hunt alluded to the contradictory facts which were generally published during the raging of an epidemic, showing that many or most of these facts, even if fairly stated, were not common facts, but extraordinary cases or histories published for a special purpose, and that the tendency of such conflicting evidence was injurious both to the progress and credit of medical science. He then proceeded to show that statistical inquiries properly directed and patiently carried out, would prove the natural correctives of this fallacious testimony; and that by collecting an immense number of common cases of ordinary character, and comparing these with the singular cases collected with them, the illegitimate influence of the latter would be neutralized, and the truth would necessarily become apparent. The author glanced at a few of the difficulties encompassing the medical department of statistics, among which were noticed the various degrees of susceptibility to morbific and remedial influences in the different *subjects* of disease, arising from age, sex, temperament, vigour, hereditary and organic peculiarities, habits, and general health. Modifications arising externally to the patient were also alluded to, such as weather, season, climate, latitude, water, food, clothing, shelter, ventilation, drainage; each of which was shown to have some influence more or less affecting the truth of statistical results. These difficulties were more applicable to therapeutics than to the etiology and propagation of disease. The questions relating to small-pox and vaccination were alluded to as being singularly adapted to statistical inquiries; and it was urged that many questions concerning the history of epidemics, especially with relation to seasons, locality, and temperature, as also to barometrical and electrical phenomena, might easily be settled by statistical inquiries, and worked out into some useful result. The author concluded by some observations on the great and lasting value of statistical tables when applicable to the inquiries before the Society, and called upon the profession, without whose assistance and co-operation the Society would prove most inefficient, to aid its endeavours by responding to the queries issued from time to time, until some really valuable results are obtained, which, when published, would be as useful to the contributors as to the Society itself.

Biographical Sketch

OF

ROBERT LEE, M.D., F.R.S.,

LECTURER ON MIDWIFERY AT ST. GEORGE'S HOSPITAL, AND PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL.

THE subject of this memoir was born in 1793, at Whitelaw, on the Gala, a river celebrated in Scottish song, in the parish of Melrose, and county of Roxburgh. His father, John Lee, was long one of the most extensive and opulent agriculturists in the south of Scotland. His second son, Robert, was educated at Galashiels, chiefly by the late Rev. Robert Balmer, D.D., of Berwick. The Rev. Dr. Lee, the learned Principal of the University of Edinburgh at the present time, is related to Dr Robert Lee. His native place was on the opposite side of the Gala, about half a mile from Whitelaw. Principal Lee is without doubt the ripest scholar in Scotland. Robert Lee went to the University of Edinburgh in 1806. He was at first intended for the church, but after attending all the literary and philosophical classes, he relinquished his clerical studies, and devoted himself to medicine. He took the degree of M.D. in 1814, on the the same day with Professor Grant, Dr. John Davy, Dr. J. J. Bigsby, Dr. Gairdner, (of Bolton-street,) and Dr. Macgrave, (of Antigua,) all of whom have risen to eminence in their profession. Dr. Lee was a member of the Royal Medical Society while at Edinburgh, and regularly attended the meetings during the whole period of his studies; but we believe he never once, from the great natural timidity under which he then laboured, spoke upon any subject, or attempted to take part in any debate. A similar circumstance is recorded of the historian, David Hume, who was for years a perfectly silent but regular member of one of the literary societies of Edinburgh. Dr. Lee was consequently known only to a few of his fellow students, by his great industry, his extensive read-

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ing, the diligence he displayed in attending the lectures of the various professors, and by his unwearied habit of taking full notes of the lectures in short hand, especially those of Drs. Gregory, Hamilton, and John Thomson. Before this time an event had occurred, trifling in itself, but which influenced in a remarkable degree the whole of his future career. One day Dr. Lee was walking in Nichol-on-street, and saw a copy of Taylor's "Stenography" in the window of a bookseller's shop. He went in and inquired the price, which was five shillings. He bought the book, and before the end of the session, without any help except that afforded by Taylor, he could, and did, take down the substance of every lecture he attended. Dr. Lee subsequently held, with reputation, the office of clinical clerk to Dr. Rutherford, in the Royal Infirmary. After graduating at the University, and also obtaining the diploma of the Royal College of Surgeons, he retired into the country for a year, and then returned to the Royal Infirmary of Edinburgh, where he acted as physician's clerk to Dr. James Hamilton, sen., till the close of 1817.

In 1817, when Dr. Lee was a physician's clerk in the Royal Infirmary of Edinburgh, with no peronal friends, it happened that Mr. Wilberforce and Mr. Zachary Macaulay, father of the historian, formed a benevolent plan of introducing a knowledge of medical science into St. Domingo, as a blessing fitted to follow upon the abolition of the slave-trade. Their intention was to found an university in Hayti, as an agent for the civilization of the black population. These philanthropists appointed a committee in Edinburgh, consisting of the late Dr. Abercrombie and some of the most distinguished men in that city, to select a physician fitted to teach anotomy and medicine in the proposed university. The choice fell on Dr. Lee, and he was appointed by the committee Professor of Anatomy and Medicine, and directed to draw up lists of books and apparatus, required. Subsequently, these arrangements were altered by a committee sitting in London, and Dr. D. Stewart, the author of a paper on the Use of Opium in Uterine Hæmorrhage, in the fourth volume of the *Medico-Chirurgical Transactions*, was sent out to St. Domingo; and in a few years the whole island fell into a state of anarchy and bloodshed, in which Dr. Stewart unhappily perished. At the time Dr. Lee considered this a great misfortune, but it was, in reality, an escape from imminent danger, and a stroke of good fortune. Wilberforce and Macaulay continued his firm friends, and the matter led to a favourable introduction to Sir Gilbert Blane, and finally to his settling in practice in London.

Dr. Lee has the most vivid recollection of the kindness of these distinguished men, when he arrived as a comparative stranger in London. The following note, which he received from the great philanthropist about this time, shows the kindly feelings of this eminent man, and the incessant demands which his humane labours made upon his time.

Kensington Gore, Wednesday, five o'clock.

MY DEAR SIR,—I cannot tell you how vexed I am at being again disappointed in my intention of calling on you, in consequence of having received a hint from a kind friend that you were just now rather on the invalid list. Both Monday and yesterday I was engaged till late (by public business in committee) in a distant part of London, and did not reach Westminster till I was too late for the House of Commons, and to day I have been imprisoned here till it is too late for me to go into Westminster at all. I beg your excuse for this trouble, and I am, with esteem,

My dear Sir, your faithful servant,

W. WILBERFORCE,

Dr. Lee.

Soon after this, Dr. Lee had entrusted to his care, by Sir Gilbert Blane, the only son of a distinguished statesman, who was afflicted with a hopeless disease. During this part of Dr. Lee's career, his life was spent in great seclusion in the family of the distinguished nobleman alluded to. The only persons whom he then mixed with in the performance of his duties, were men who have since achieved the highest honours this country can afford, several of them having risen to be lord chancellors and prime ministers, and other great officers in the state. Sir Gilbert Blane was himself one of the favourite pupils of Dr. William Hunter, was one of his most enlightened and enthusiastic admirers, owed his first important step in life to his patronage, and scarcely ever failed, to the end of his days, to hold up this distinguished physician to Dr. Lee, as the model chiefly worthy of his imitation.

In 1830, Dr. Lee's certificate for admission to the Royal Society was written by Sir Gilbert Blane; and, in 1833, Dr. Lee's first work, entitled, "Researches on the Pathology and Treatment of some of the Most Important Diseases of Women," was dedicated "to his earliest benefactor and revered friend, Sir Gilbert Blane, Bart., M.D.,F.R.S., who has for upwards of half a century devoted his talents to the advancement of medical science." Dr. Lee has never forgotten nor ceased to proclaim his obligation to this his earliest professional friend.

Dr. Lee, on relinquishing his first appointment, spent the winter of 1821 and 1822 in Paris, dissecting with his friend, the late Dr. William Cullen, in the private cabinet of M. Breschet, visiting the hospitals, attending the lectures of Professors Beclard, Desormeaux, and M. Capuron, and studying the works of the best French accoucheurs, especially Guillemeau, Mauriceau, and Portland. After making an extensive tour with a family of high rank in the North of Italy and south of France, he returned to England. In 1823, he became a licentiate of the Royal College of Physicians of London, and a member of the Medico-Chirurgical Society. In 1824 he fixed his residence No. 2, upper Johnstreet, Golden-square, and was appointed physician-accoucheur to a public institution; but when his prospects of professional success in London appeared promising, he was attacked with a severe indisposition brought on by his incessant attendance on cases of difficult labor at public institutions. His recovery was slow, and fearing that his constitution was not sufficiently strong to endure the great fatigue which midwifery practice demands, he sought and obtained a medical appointment in the East India Company from the President of the Board of Control, and in the autumn was preparing to embark for Calcutta, when an occurrence took place which altered this resolution, and greatly influenced his future fortunes. This was an invitation to proceed to Odessa for nine months as physician to the family of his Excellency, Prince Woronzow, then governor-general of the Crimea, and the Russian provinces on the Black Sea.

This offer was accepted; and leaving London about the end of October, Dr. Lee set out for Odessa, crossing Europe by Vienna, Poland, and the Ukraine, and reached his destination before Christmas. In the autumn of 1825, Dr. Lee accompanied the governor-general and his family to the Crimea, where he was introduced to the Emperor Alexander, Count Diebitsch, and Sir James Wylie. The emperor had visited the Crimea with an idea of building a palace on this beautiful coast, and an intention of retiring at no very remote period from the cares of empire. It, however, happened otherwise. He was seized with the epidemic fever then raging frightfully in the Crimea, and died after a very short illness. Dr. Lee dined with the emperor a few days before he was attacked. A

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narrative of all the circumstances attending the illness and death of his majesty, entitled, "The Last Days of the Emperor Alexander," was published by Dr Lee, in the *Athenæum*, some years ago, to counteract the rumour which had been current, that the emperor did not die a natural death. The following is the conclusion of this interesting narrative, and which is conclusive respecting the suspicions which had prevailed.

"On the post-mortem examination of the body being made, the appearances observed were such as are most frequently met with in those dying from bilious remittent fever, with internal congestion. Two ounces of serous fluid were found in the ventricles of the brain, and all the veins and arteries were gorged with blood. There was an old adhesion between the pia and dura mater, at the back part, but of no great extent. The heart and lungs were sound, but too vascular. The liver was turgid with blood, and of a much darker colour than natural. The spleen was enlarged, and softened in texture."

"The prevalence of fever in the Crimea during the autumn, the sudden change of the weather when the emperor left the coast, the usual symptoms appearing in the course of a few days after quitting Perecop, as I had before observed in others, with the subsequent history of the disease, and the appearances after death, rendered it certain that the Emperor Alexander was cut off by the bilious remittent fever of the Crimea. During the six weeks I remained at Taganrog, after the emperor's death, I never heard that any one entertained a doubt, or expressed a suspicion, that his majesty's death was attributable to any other but a natural cause."

Dr. Lee had the honour of introducing the use of quinine for treating the fevers of the Crimea, which had never previously been known in practice there, but which was attended by the most beneficial results.

He returned to London from Russia with the Prince and Princess Woronzow, at the end of December, 1826. Sir John Malcolm, the intimate friend of his Excellency, was at this time about to quit England for the East Indies, as governor of Bombay; and Dr. Lee, who still held his Indian appointment, was introduced to Sir John Malcolm, with the view of his proceeding to Bombay in the suite of the governor, as his physician. Being now, however, in comparatively independent circumstances, and still suffering from attacks of Crimean fever, eager, also, to remain in London, and follow in the footsteps of his immortal countryman, Dr. William Hunter, whose career he had ever placed before him, these tempting prospects were renounced.

Dr. Lee first resided at the same house in Upper John-street, which had been occupied by Mr. T. A. Stone at the commencement of his successful career. On the opposite side of the street Sir Charles Clarke lived for many years, and delivered his lectures on midwifery. In about a year he removed to the house in Argyll-street which had likewise been occupied by Mr. Stone, and where that gentleman and Mr. Blagden had delivered their lectures. These lectures Dr. Lee had formerly attended. Here also Dr. Lee himself delivered his first lecture on midwifery.

Since the commencement of 1827, Dr. Lee has never been absent from London for a single day, except on professional business, and his whole time, almost without interruption, has been devoted to the laborious study and practice of his profession. Of the public appointments which he has held, and of his contributions to anatomy, physiology, pathology, and midwifery, we now propose to give a short sketch.

In 1827, he was elected physician to the British Lying-in Hospital in Brownlow-street—an institution which has now existed for upwards of a century, and to which many eminent physicians have been attached—namely, Drs. William Hunter, Macaulay, C. Kelly, Layard, Bromfield, Garthshore, Underwood, Sir Richard Croft, Sir Charles Herbert, and Dr. Henry Davies. In 1829, Dr. Lee became lecturer on midwifery in the School of Webb-street, and physician-accoucheur to the Southwark Lying-in Institution.—In 1830 he was elected a fellow of the Royal Society of London, and secretary of the Royal Medical and Chirurgical Society, and held the office till 1835.—During the two succeeding years he was elected one of the vice-presidents. In 1832 he was elected physician-accoucheur to the Saint Marylebone Parochial Infirmary and Parish. In 1834 he received from the Crown the appointment of regius professor of midwifery in the University of Glasgow, which he soon resigned; the following year he was appointed lecturer on midwifery and the diseases of women and children at St. George's Hospital, an office he still holds. In 1841 he was elected a fellow of the Royal College of Physicians of London. In 1850 Dr. Lee succeeded Sir B. Brodie as President of the Western Medical Society. For a number of years Dr. Lee resided at 14, Golden-square, but eight years since he removed to No. 4, Savile-row, Burlington-gardens, where he now resides.

The lectureship in Webb-street was the first solid indication of success which he received in London.—It was worth £150 a year, and was entirely owing to his paper on Inflammation of the Veins of the Uterus. He resigned Webb-street on being appointed Professor of Midwifery in the University of Glasgow. He was induced to accept the Glasgow appointment, from his veneration for William Hunter, whose splendid museum enriches that city. He went down, and read his introductory thesis to the Senatus Academicus; but before this was delivered, he had resolved to resign his appointment, and return to London, which he did immediately. His post at Webb-street had been filled up, and for a session he lectured to twelve students in his dining-room at Golden-square. One day, Dr. M'Leod and Mr. Babington called upon him, and most unexpectedly offered him the lectureship at St. George's Hospital, just vacated by Dr. Henry Davies and Mr. Stone. This offer was gladly accepted, and St. George's became thenceforth the scene of his labours as a teacher of midwifery.

During the last twenty-three years Dr. Lee has preserved written histories of all the important cases of puerperal and uterine disease, and all the cases of difficult preternatural and complicated labour which have come under his observation. This could never have been accomplished without the use of short-hand writing, the art of which, as already stated, he taught himself at Edinburgh when a student attending the medical classes. All the cases and dissections he has seen have been more carefully registered than the fees he has received. He has expended very considerable sums on preparations, drawings, and engravings. His last paper in the *Philosophical Transactions* "On the Ganglia and Nerves of the Heart," required an expenditure of about £100, less than £30 of which was defrayed by the Society. This he did for an institution, the council of which had endeavoured, by the most malicious and illegal deeds, to rob him of the scientific reputation he had merited by a discovery which is now considered almost universally as one of the greatest anatomical advances of the present or the past century.

Of all the numerous publications of Dr. Lee, none exceed in value his "Clinical Midwifery." This small work contains the histories of 545 cases of difficult preternatural and complicated labours, with commen-

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taries, the results of the most extensive observation. It is doubtful if this work has not done more good than any other of his publications. It has been declared to be "more instructive to the juvenile practitioner than a score of systematic works;" that "it will be consulted by every accoucheur who practises his art with the zeal which it merits;" that it is "an invaluable record for the practitioner;" that it is "an admirable book of precedents;" and that it is "a storehouse of valuable facts and precedents." Dr. Lee followed, in this, the example of some of the most distinguished accoucheurs of modern times. Portal's work, published in 1685, consisted of the histories of eighty cases, with short commentaries. Mauriceau's second volume consists entirely of cases, 700 in number, and 150 in the appendix, but many of the cases are not cases of labour. His observations were carried on during a period of twenty-four years. In 1733, Giffard published an account of 225 cases of difficult and dangerous labour. Smellie's last two volumes are almost entirely filled with cases. Ramsbotham and Collins' work are chiefly collections of cases: and these are the materials from which the sound principles of midwifery can alone be extracted. Teaching by example is the only secure mode of teaching midwifery. The most irrational opinions have recently been promulgated, and attempts made to subvert the fundamental doctrines of midwifery, by some young men placed in the office of teaching without any practical experience.

Dr. Lee has been, from the outset of his long career, a clinical lecturer. All his lectures are emphatically clinical. Their copious illustrations are drawn from his own vast experience, and from the works of the greatest practical and systematic writers of France and England. He has ever entertained a deep dislike to the mechanical doctrines which have prevailed on the Continent so extensively during the last fifty years, and which now begin to appear in this country. As an operator in midwifery, we question if, at the present time, there is one who possesses equal skill, decision, and vigour, in cases of real difficulty. We have never heard that he was ever appalled by any danger.

Another great point in the career of Dr. Lee is the admirable investigation of the pathology of phlegmasia dolens, inflammation of the veins of the uterus, and puerperal fever. Modern pathology can scarcely produce a more important monograph than his researches on the pathology and treatment of some of the more important diseases of women. It is important not only as regards obstetrics, but as regards general pathology and practice, for it must ever remain the basis of the whole subject of phlebitis, and the entire pathology of the venous system, a department of great and rapidly increasing consequence.

Dr. Lee's contributions to the ovular theory of menstruation place him in the first rank as a cautious and skilful physiological observer. To his sagacity we owe the facts upon which this beautiful theory rests. Cruikshank had observed and recorded a single case of rupture of a Graafian vesicle at the catamenial period: but to Dr. Lee we owe the first series of cases exhibiting this remarkable phenomenon, and which gave it all its meaning and significance. He was the first to examine the ovaria during menstruation, with the view of ascertaining what was the condition of the organs at this time. It was the observations made in this subject by Dr. Lee which ultimately led to the discovery of the escape of ovula at each monthly period. Dr. Lee's observations were made six years before MM. Gendrin and Negrier published upon this subject.

Dr. Lee has been, and still is, one of the most laborious men in the profession. Without this the great subjects he has devoted himself to could not have been accomplished. For seven years, during the spring, summer, and autumn months, he rose at daylight, to dissect the ganglia and nerves of the uterus, and continued dissecting preparations in alcohol till eight in the morning. Then followed the labours of the day. Often, on returning home from a labour at five or six in the morning, having never been in bed, instead of retiring to rest, he went into his dissecting-room to work till the business of the day began. Often his labours with the lamp and condenser were continued through the greater part of the night—Such was the toil required to work out the nervous system of the uterus.

Dr. Lee is still, after twenty-three years of unremitting toil, in full health and vigour, both of mind and body. To this our pages have borne ample witness.

Dr. Addison, at the close of his presidential year at the Royal Medical and Chirurgical Society a few weeks ago, referred, in his eloquent valedictory address, with a just pride, to the importance of the discussions which had recently taken place in the Society. It is not too much to say, that the almost entire body of the Society, and the great mass of the profession, have thoroughly appreciated the consummate talent and address which Dr. Lee brought to these discussions. On other points there may be difference of opinion, but as regards the extraordinary and profound knowledge of obstetrics displayed by this physician, there can be no doubt or question. The result cannot but be of immense service to the science and practice of midwifery. The very foundations of this department have been exhibited and secured by the hand of a master.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY,

IN THE

HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, et dissectionum historias, tum aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.*, lib. 14, Proemium.

ST. BARTHOLOMEW'S HOSPITAL.

Acute Rheumatism, with Cardiac and Ophthalmic Complications.

[Under the care of Dr. Roupell.]

When the great number of cases of rheumatic fever which are treated in the hospitals of London, and the serious nature of the affection, are recollected, it will at once become obvious why we have undertaken to present in the "Mirror" a faithful sketch of the various modes of treatment adopted by the physicians of charitable institutions. In former reports, we took a survey of the therapeutical means adopted in uncomplicated cases, these means consisting principally in the administration of colchicum, nitrate and acetate of potash combined, lemon juice, acetate of potash, and citric acid, respectively. We have now to direct attention to the steps of the treatment when cardiac complications are either existing or are suspected. Nor will this account be wanting in interest, as according to a late authority (Dr. Watson,) "one half of the rheumatic patients admitted in the hospitals of London have the heart or its membranes implicated."

And here a question of vital importance arises, namely, whether it would not be advisable in almost all cases gently to affect the gums, seeing that a great

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amount of mischief may take place in the pericardium and the heart itself, without striking symptoms? This remark might principally apply to that variety of rheumatic arthritis which has been distinguished by the name of *fibrous* acute rheumatism, which variety is said to affect the parts external to the joint, to be generally accompanied by intense febrile excitement, and in which the tendency towards peri- or endo-cardial inflammation is greater than in the *synovial* variety. Nor should it be forgotten that by far the greater number of patients attacked with acute rheumatism are younger than forty, and that the less advanced in age the more chance there is of carditis becoming developed.

But it might be asked, does bleeding and mercury dispel and efface all the traces of pericardial or endocardial inflammation? The best authorities answer in the negative as regards the complete removal of all traces of the inflammation; but it must be obvious that doing nothing would be worse than having recourse to venesection and mercury, for by these means either the amount of effusion may be lessened, or the extent of the subsequent adhesions greatly diminished. That bleeding carried too far, may, instead of doing good, favour the deposition of warty bodies on the valves, has been satisfactorily shown, but great reliance is generally put in the action of mercury; and in this latter respect we shall in conclusion quote a passage of Dr. Watson's valuable lectures in which the opinion of this physician is strongly expressed. "There are some cases which yield readily to calomel and opium: and in the fibrous disease I think that calomel and opium are the remedies to which, after sufficient bleeding, you will do well to trust. For it is under this character that the extension of the disease to the membranes of the heart is so liable to happen; and if anything can protect the patient against this fearful complication of a malady, which, previously attended by no danger, becomes by this addition almost necessarily fatal, or if anything can arrest the carditis before it leaves indelible mischief imprinted on the heart, it is (in my opinion) *mercury*."

Case 1.—*Rheumatic fever; first attack; endocarditis.*—Elizabeth C——, twenty-five years of age, a servant-girl of pale and delicate complexion, was admitted Nov. 28, 1850, under the care of Dr. Roupell. Patient presents the usual symptoms of acute rheumatism, with pain in the lower part of the chest; a loud systolic bruit is heard at the base of the heart, and there is increased impulse, with an occasional friction sound; pulse 116, small; menstruation regular.

Dr. Roupell ordered low diet: venesection to twelve ounces; two grains of calomel, and a quarter of powdered opium, three times a day, with draughts of Mindererus' spirit, and small doses of antimony. The patient was bled in the upright posture, without faintness being brought on, but the pulse increased in volume and diminished a little in frequency: the blood being the next morning buffed and cupped.

On the third day, there was less pain in the wrists, knees, ankles, and chest, but the right shoulder became involved: a little mercurial fœtor was noticed, and the pulse beat 96. On the eighth day, the symptoms had not much altered, though the medicines were steadily continued; the cardiac impulse had increased, there was still a systolic murmur at the base, and a loud friction sound under the third rib and sternum. The rheumatic pains were now confined to the left leg and right arm, and the mouth being slightly affected on the eleventh day, the mercury was discontinued.

On the thirteenth day, the endocardial murmur had disappeared. The draughts were continued, and one grain and a half of opium taken every night. A systolic murmur at the third intercostal space still persisted; it was heard on the twenty-second day, at which time good diet, bark, and guaiacum, were prescribed. These medicines caused some pain and sickness of stomach; they were therefore replaced by sulphate of magnesia in mint-water, the opium at night being continued. The patient improved rapidly from this time; she was ordered quinine on the thirty-second day, and was discharged two months after admission, quite free from articular pain, the general health much improved, but the systolic bruit at the base of the heart, and heard about the third intercostal space, still persisting.

Case 2.—*Rheumatic fever; endocarditis; second attack.*—Jane S——, a servant-girl aged twenty-one, was admitted under the care of Dr. Roupell, Oct. 17, 1850, with rheumatic inflammation in the ankles and shoulder, as well as constriction of the chest. A loud blowing sound is heard in all parts of the præcordia, with a marked systolic bruit, and occasional gurgling sound, the blowing and bruit being louder at the base of the heart. Skin hot and dry; pulse 120, full and bounding.

Dr. Roupell ordered venesection to ten ounces; two grains of calomel, one-quarter of tartar-emetic, and one-sixth of powdered opium every sixth hour. The bleeding was performed in the upright posture, and from a free incision; it was attended with considerable improvement in the state of the pulse; signs of syncope were produced, and the blood was considerably buffed next morning.

On the fourth day all the symptoms had abated, the gums were affected, but the bruit and murmur were still very loud, though not quite so much as at first. Patient now took draughts of Mindererus' spirit and antimony, and one grain of opium at night. On the ninth day extensive affection of the mouth, and salivation became manifest. Leeches were applied to the jaws, and the patient used a gargle of chloride of soda. On the 13th day the salivation decreased, the rheumatic pain and fever had quite disappeared, and quinine was ordered. This alkaloid, however, increased the palpitation and pain at the heart; it was therefore replaced by digitalis and sulphate of iron; brandy and beef-tea were allowed, and a few days afterwards the patient began to take bark and guaiacum. She was discharged free from all rheumatic pain five weeks after admission, with some constriction at the chest on breathing deeply, and palpitation on exertion.

Case 3.—*Rheumatic fever; first attack; iritis.*—Ann H——, a needlewoman of pale countenance, aged twenty-one, was admitted Dec. 19, 1850, under the care of Dr. Roupell. The patient presented the usual symptoms of the affection about the wrist, shoulder, and knee; the catamenia had appeared a week before admission; percussion and auscultation give normal results, and there is no pain at the heart; pulse 90, small and weak; bowels relaxed. Dr. Roupell ordered one grain and a half of opium at night, but the pain being unabated on the next day, six leeches were put to the wrist-joint, draughts of Mindererus' spirit and antimony given every fourth hour, and the opium continued.

On the eighth day the symptoms were more favourable after leeches had been put to the shoulder, where severe pain had sprung up. The patient improved slowly up to the twenty-fifth day, when pain and stiffness still existed in the knee. She was then ordered iodide of potassium in small doses, with sarsaparilla, the opium being increased to two grains at night.

About one month after admission, the woman complained of uneasiness in the left eye, intolerance

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of light, and pain. On examination, the usual signs of iritis were observed, and Dr. Roupell ordered calomel and opium, and six leeches to the temporal region. On the second day after the occurrence of the ophthalmic affection, the iris was fixed, and a large quantity of lymph deposited towards the irregular pupil. Some more leeches and extract of belladonna were now prescribed. Meanwhile the pain entirely left the previously affected articulations, a portion of the lymph effused on the iris was absorbed, pain in the organ gave way, and the patient was discharged at her own request, with a rather vascular conjunctiva, being recommended to apply the extract of belladonna night and morning.

Case 4.—*Acute rheumatism, second attack; endocarditis; pericarditis, and double pneumonia.*—Mary T——, aged forty-five, a washerwoman, was admitted, under the care of Dr. Roupell, Nov. 19, 1850. The first attack occurred seven years ago, without *obvious* heart affection; the patient has ceased to menstruate, and presents the usual signs of rheumatic fever; pulse 104, full; constriction at the chest; impulse of the heart greater than is normally the case; systolic murmur at the base of the organ. As the face was flushed and the countenance anxious, Dr. Roupell ordered ten grains of calomel and two of opium to be taken at night, and a draught of acetate of ammonia with antimony thrice a day.

On the next day the systolic murmur remained and a faint to-and-fro sound was audible. The patient was now ordered to be cupped over the region of the heart to twelve ounces, and suddenly all the symptoms of pneumonia unfolded themselves, and continued very intense for some time. Dr. Roupell immediately ordered calomel and opium. On the fourth day the gums became spongy; the mercury was diminished; the pneumonic symptoms, however, remained unaltered, but the heart's impulse became natural, and the systolic murmur diminished.

The patient was on the eighth day fully under the influence of mercury; on the tenth, ulceration within the mouth took place, but the pain in the arms continued, the pulmonary inflammation having now reached the second stage. Dr. Roupell at this point ordered venesection to six ounces, yet the systolic bruit became louder than it had been before, chiefly, at the base, and the impulse was more powerful.

On the fifteenth day the wrists were swollen and very painful; ulceration had occurred in the mouth. On the seventeenth day the endocardial murmur was heard plainly in the third intercostal space, and on the twenty-first the pain in the joints began to abate. Beef-tea and brandy had been allowed for a few days previously; leeches and gargles were used for the inflammation and ulceration of the gums. The latter were soon benefited; bark and iodide of potassium were prescribed; the signs of pulmonary consolidation slowly disappeared, and towards the tenth week after admission the patient was getting stronger. She nevertheless complained of a dull continued pain in both shoulders, preventing motion. Dr. Roupell gave her iodide of potassium in extract of sarsaparilla, and chloroform was used as an application to the shoulders. This topical remedy had excellent effects, and the patient was discharged in a very favourable condition about three months after admission.

By glancing at the sketch of the first two cases, it will plainly be seen that our sheet-anchor in cardiac complications has not the power of effacing the traces of the peri- or endo-cardial inflammation; it will, however, be observed how readily the arthritic affection gives way with the free use of mercury. The iritic complication, which happened in the third case, might be looked upon as a sort of metastasis or extension of the disease, for most of the events which characterize inflammation of the fibrous investment of the heart were here manifest. Nor should it be overlooked that the heart did not suffer in this instance, the extension having been confined to the iris, a membrane to which fibro-muscular properties are generally conceded.

The most striking feature of the fourth case seems to be, not that pneumonia supervened on rheumatism, but that the inflammation of the joints, of the heart, and of the substance of the lungs, existed for some time simultaneously. That proximity and sympathy should now and then give rise to pleurisy, when the pericardium is inflamed, is easy to conceive; but there are few examples of a triple phlogosis progressing at the same time, as seen in Dr. Roupell's fourth case.

In examining the records of the cases of rheumatic fever treated by Dr. Roupell since October, 1850, we find that the forty cases which were admitted illustrate in a very interesting manner the notions currently received as to sex, age, cardiac complications, and the proportion of recoveries. Out of the forty patients, twenty-three were males, and seventeen females.

Under 10 years	...	...	...	...	...	...	...	0
From 10 to 15	...	...	...	...	...	...	...	3
" 15 " 20	...	...	...	...	...	...	...	9
" 20 " 30	...	...	...	...	...	...	...	17 (1)
" 30 " 40	...	...	...	...	...	...	...	5
" 40 " 50	...	...	...	...	...	...	...	5
" 50 " 60	...	...	...	...	...	...	...	1

Among the forty cases, twenty-five were affected with cardiac complications:—

Endocarditis	...	...	...	...	...	20
Pericarditis	...	...	...	...	...	0
Endo- and Peri-carditis	...	...	...	...		5

In three cases of heart affection the lungs were likewise attacked. Of the forty cases, twenty-nine recovered, two died, and nine were, in March 1851, under treatment. We should not omit to note, that one of the two fatal cases was complicated with albuminuria, and the other with endo-pericarditis and pneumonia, accompanied by a large exomphalos, a small femoral hernia, and an attack of peritonitis. In this latter instance the autopsy showed the pericardium universally adherent, and deposits on the aortic valves.

Dislocation of the Humerus on the Dorsum of the Scapula; Reduction.

(Under the care of Mr. Stanley.)

The nomenclature of the various dislocations of the shoulder has given rise (at least among continental surgeons) to frequent discussions, which, as is too often the case, have not ended in a perfect understanding upon the subject; and the English reader, after taking cognizance of the divisions partially adopted in France and Germany, gladly returns to the denominations, *downwards*, *forwards*, and *backwards*, taught in our schools. The luxation which we have now to consider, and which happened in a patient of Mr. Stanley's, is called by some French surgeons the sub-variety of the sub-acromial, and by others, sub-spinal; the Germans, as stated by Mr. South in "Chelius' Surgery," call it outwards: but most surgeons will agree with us that backwards, or on the dorsum scapulæ, is as correct a name as can be desired. That this displacement occurs but very seldom is a well known fact; it had not been seen for a long period at St. Bartholomew's Hospital; and Sir Astley Cooper says, in his work on Dislocations and Fractures: "Two cases only of this accident occurred in Guy's Hospital in thirty-eight years, the first during my apprenticeship. The nature of the accident was at once obvious from the projection of the head

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of the bone on the dorsum scapulæ. The bandages were applied in the same manner as if the head of the humerus had been in the axilla, and the extension was made in the same direction as in that accident." The reduction was easily effected; the second case presented itself several years afterwards, and was reduced by the dressers. Sir A. Cooper mentions seven more cases, which mostly occurred in private practice.

That the reduction took place so readily, by using the *same* means as for dislocation into the axilla, might create surprise, for it seems at first sight natural that extension should be made a little *outwards*, when the head of the bone is lodged on the dorsum of the scapula. But the dislocations of the shoulder-joint are generally fraught with so little danger, the reduction is commonly so easily obtained by proper extension, counter-extension, and coaptation, that it would be perhaps unwise to establish very nice distinctions as to the precise direction in which extension is to be made.

Mr. Stanley's patient was a farm labourer, aged sixty-two years, a strong, healthy-looking man, who was admitted on the 4th of April, 1851, suffering from a dislocation of the shoulder-joint. The patient states that he was driving in a cart, in the company of a fellow-labourer, when the horse fell, and both the men were thrown or jerked out of the cart. One of them escaped unhurt, but the patient was violently thrown on his right shoulder, the whole weight of the fall being borne by that articulation. The contusion and laceration was not considerable, as he luckily fell on a plot of grass; but it would appear that the lesion was of a serious character, as some of the actions of the joint were suddenly lost.

The patient applied at once to a surgeon, who told him that the limb was dislocated, and attempted reduction, by putting his heel into the patient's axilla, whilst the latter was lying on his back. The efforts were, however, fruitless, and the man was advised to repair to this hospital. On examination, it was found that the axis of the right humerus, in its relation to the body, was very much altered. Beneath the spine of the scapula, and towards its outer side, was a firm hard swelling: this was the head of the bone, the fact being proved, negatively by its absence in the proper position, and positively by the swelling moving when the arm was being rotated. The glenoid cavity can be felt empty; there is very little motion of the arm, and the deltoid is tense. On rotating the arm, a kind of crepitus is distinguished, which does not feel like the ordinary crepitus of fracture, but is probably occasioned by the rubbing of the head of the bone against the axillary border of the scapula.

Mr. Stanley having determined to proceed at once to the reduction of the limb, the man was placed in a chair, and his body fixed; extension was first made in a direction outwards, and rather downwards, the limb being grasped above the elbow. Scarcely had the extension begun to be used, before the bone was felt to slip from the scapula into the axilla. Further extension was made for about ten minutes, with no further effect. A jack-towel was now placed around the upper part of the humerus, and the head drawn upwards; extension was then suddenly remitted, and the bone slipped into its socket. After a short stay in the hospital, and proper confinement of the shoulder, the patient was discharged with the full use of his arm.

Cases of Poisoned Pustule of the Lip.

[Under the care of Mr. STANLEY and Mr. LLOYD.]

If in this country very sad cases of glanders, dissection wounds, &c., are but too frequently met with, as resulting from the absorption of some morbid poison, we seem, on the other hand, to be free from the terrible disorder, called by our continental brethren, "charbon, or pustule maligne," which is likewise supposed to owe its origin to some infectious animal matter. But if this disease be rare, we now and then see another which bears a strong analogy to it—namely, a pustule developed in some part of the face, mostly the lip, the intense inflammation of which is excited by a poison not altogether perhaps belonging to the animal kingdom, but exercising (whether it be a mineral or a vegetable production) a severe irritation on the spot where it happens to become deposited.

The previous condition of the patient has doubtless some influence on the rapid development of symptoms; but there must certainly be a great morbific power in the particles which give rise to the violent local manifestations, and the typhoid character of the accompanying fever. Examples of such an affection, as involving the lip, have lately been noticed at St. Bartholomew's Hospital, and though the cases at first looked very much like instances of malignant pustule, it was evident that all the characters of the latter disease were not present.

It was thus tolerably easy to make out what it was not, but a much more difficult task was to assign to the cases their proper place in the nosological classification. This was not, however, the principal point; a more interesting one, especially as the cases followed each other rapidly, was to determine which was the most advisable line of treatment. From the following particulars it will probably become clear that support, and the free use of the scalpel on the inflamed part, is the course most likely to yield favourable results. We proceed to give a few details of the cases.

CASE 1.—Henry R——, aged eighteen, a lad of average stature and pale countenance, was admitted into Darker ward, under the care of Mr. Stanley, February 25, 1851. The upper lip on the right side of his face is much swollen, its surface of a livid redness, exhibiting a few scattered points, whence some purulent-looking matter exudes. The patient complains of a dull, aching pain in the right side of his face, though in tolerable health otherwise. Skin warm and moist; tongue humid, covered with a brown fur in the centre, and papillæ prominent; pulse 80, soft, and very compressible.

His employment is that of a turner. Eight days ago he noticed a pimple on his upper lip, about the situation of the junction of the skin with the mucous membrane. On the same evening he scratched off the head of this pimple, and fancies that some of the rosewood dust came in contact with his lip. From the time of its commencement, the sore has gradually been getting worse, with a great deal of throbbing pain, preventing the patient from having any rest at night. Breathing tranquil.

The house-surgeon made a crucial incision into the swollen lip, and another longitudinal one at its lower part. Beef-tea, wine and bark were prescribed, and a poultice applied to the inflamed spot. On the next day the patient was doing very well; there was more discharge from the lip, and the inflammation and pain had diminished. The same treatment was continued. From this time the lip improved, and the patient was discharged in a few days quite well.

CASE 2.—James C ——, aged thirty-six, was admitted into Darker ward, February, 3, 1851, under the care of Mr. Stanley. Both lips were much swollen, and covered at their edges with pustules; the skin and cellular tissue were red, hard, tense, and œdematous, and appeared in a state of phlegmonous inflammation. This was more extensive round the upper than the lower lip. The whole of the right cheek above the mouth was swollen, and the right eyelid puffy; counte-

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nance not distressed; skin warm and soft; tongue furred, but moi t; pulse 144, sharp, and compressible; complains of thirst, and loss of appetite; bowels not open for two days.

The patient is a bone and ivory brush-maker, and has frequently to handle brass-wiring, which is often coated with verdigris. He was very intemperate in his younger days, but has not drunk to excess for the last eight years. His mouth was quite well six days ago, when a small pimple appeared on the lower lip, which pimple, in shaving, he cut off. The next day his lip was stiff, swollen, and painful, and it has been gradually becoming worse since.

Several incisions were made into the subcutaneous tissue of the lips, and the whole face was directed to be covered with wet lint, kept moist with cold water. Wine, beef-tea, bark, and morphine. On the next day the patient was much better, had slept well, the lower lip was much less swollen, but the upper, as well as the surrounding part of the cheek, were still much inflamed; pulse 100; tongue furred and moist; bowels open by house medicine.

A few more incisions were now made into the upper lip, and the wine, brandy, beef-tea, and bark continued. On the third day it was found that the patient had passed a tolerably quiet night, but he wandered a little, and at four A.M. he was evidently worse. Countenance pale and anxious; skin warm and soft; pulse 120, sharp, but with some power. The patient takes all his stimulus; there is pain in the face; the right cheek is more inflamed and swollen; the eyelid is again puffy, but the lower lip improved; respirations frequent and loud, and small crepitation is heard behind in the lower lobes of both lungs; not audible in front.

Incisions were again made into the cheeks, which bled rather freely. The bark was continued, but opium and ether given every sixth hour. On the fourth day the countenance was anxious; pulse 120, sharp, but not without tone; cheek painful, and much as on the preceding day; the patient became worse through the day in spite of various stimulants; the pulse feebler every hour, and he was evidently sinking. Leeches to the cheek relieved him a little, and some laudanum made him sleep for three or four hours. He died on the fifth day, the face having become pale and dusky on the affected side.

Post-mortem examination two hours after death.—Body warm, and not emaciated; rigor mortis not set in; the blood that flowed from the divided vessels congulated almost directly; the right pulmonary pleura was coated by recent layers of yellow fibrine, which readily pealed off. There were deposits of pus in the inferior lobe of the left lung, and the right was partly hepatized; there were likewise purulent deposits in the kidney; liver and spleen healthy.

Case 3.—William K——, a rather stout-built young man, aged about twenty, was admitted into Bentley ward, Dec. 28, 1850, under the care of Mr. Lloyd. The lower lip was enormously swollen, livid, and in parts red and very hot. Beneath the chin were two or three pustules, and the swelling and lividity extended up the right side of the face, as far as the zygoma. The patient complains of pain, though not severe, and not to be compared with the agony he suffered two days ago; skin hot and dry; tongue coated with a thick, brownish-white fur, but moist; pulse 140, incompressible, and of moderate volume; bowels open the day previous.

The patient is a linendraper by trade. His occupation chiefly keeps him in-doors, but his general health is very good. He states that he was very well up to six days ago, when he noticed a small pimple in the middle of his lip; it was very painful on the Sunday evening, and on the Monday his lip began to swell. The greatest pain he experienced was four days before admission, since which time it has decreased. He had smoked a cigar six days previously, but the pimple on his cheek was there before the smoking.

Mr. Stanley had known a parallel case, where the patient attributed the disorder to the irritation of a bad cigar. No active treatment had been used, in the present case, before the patient came into the hospital. Mr. Lloyd ordered calomel and jalap; twenty-four leeches to the lip; antimony and sulphate of magnesia; and an application of solution of borax. The leeches relieved the pain. The patient was, however, hot and restless; pulse 128, more compressible, but not feeble; bowels have not acted; tongue the same; passed some hight-coloured urine. Opium was ordered to be taken at night.

On the next day, the patient expressed himself as relieved; still the respiration had on the preceding night become hurried, and the next morning he breathed with difficulty. The face was not so much swollen, but dusky; small crepitation was heard at the base of the left lung; the pulse much altered, being now wiry and feeble; the bowels have acted twice; the motions were relaxed, but natural. Mr. Lloyd now ordered beef-tea; a blister to the sternum; small doses of mercury-with-chalk; and to continue the draught.

From this time he got rapidly worse; the skin became cold, and bedewed with cold perspiration; pulse 150, hardly to be felt; face very livid. Brandy *ad libitum*. He died at two o'clock. No examination could be obtained.

It is extremely probable that a similar state of lung as was discovered in the second case would have been found in this, had an inspection taken place. The typhoid condition of the patients points to a morbid poison pervading the system. Whether the fatal issue is owing to exhaustion, or to the intensity of the pneumonia, is an important practical question, because the treatment must certainly be different, according as the one or the other opinion is adopted.

ST. THOMAS'S HOSPITAL.

Epithelial Cancer round the Anal Orifice; Removal; Recovery.

(Under the care of Mr. Simon.)

Which is the most advisable course for the surgeon to pursue, when he has to deal with epithelial cancer? Shall he, under certain circumstances, remove the semi-malignant growth, or the limb where it has sprung up? From the testimony of the best authors, and from what we have seen ourselves in the metropolitan hospitals, we would incline for the severer of the two measures. This opinion is not so much grounded on nice pathological considerations, as on the undoubted fact of speedy reproduction, with which the observer unavoidably meets in his intercourse with patients. Look at the numerous scrotum and lip cases; here the lymphatic glands are almost sure to be secondarily attacked. And as for reproduction on the cicatrix itself, examples are not wanting. Mr. Dixon, at St. Thomas's Hospital, in a case of epithelial cancer of the dorsum of the hand, removed the forearm at once.

It will doubtless become more and more the practice to take off the limb, when the disease is fully established; but when such an operation is not feasible, there is of course no means left but to excise the malignant growth, and to run the chance of recurrence. One point it would be of some importance to settle—viz., whether a perfectly benign tumour may, or may not, assume, by irritation or otherwise, a malignant

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degeneration? The affirmative is generally maintained; and it is considered that originally simple follicular tumours may take on a cancerous character. But some surgeons find it difficult to adhere to this proposition, as they think that for a malignant *growth* there must be a malignant *germ*.

However this may be, it must be acknowledged that numerous cases come before the practitioner, in which it is evident that, *cæteris paribus*, a considerable amount of irritation has for a long time taken place, as is well known to happen in scrotal cancer. That a peculiar germ is sometimes generated, and that this germ may for a long period lay dormant, is shown by the fact, (of which we lately saw an instance at St. Bartholomew's Hospital,) that cancer of the scrotum may spring up in a chimney-sweeper some twenty years after he has *discontinued* to carry on his trade.

In the case which we have now to relate, the epithelial cancer sprang up in a locality where it is, according to some accounts, seldom seen; but the occurrence of cancer in such a region is quite in accordance with the fact that growths of that kind are prone to appear in the vicinity of some of the orifices of natural canals, as the penis, pudendum, lip, &c.—localities which are abundantly supplied with follicles. The part affected was actually subjected to a great deal of irritation from riding on horseback, and, possibly, want of cleanliness; but these two circumstances are certainly not rare, and cancer of the anus is not very frequently met with, so that it might be legitimately inferred that in this patient there must have existed a *predisposing* cause, which it is the duty of our modern pathologists sedulously to inquire into. It is likewise clear that there must be, as Dr. Walshe mentions, great confusion between cancer of the *rectum*, and the same disease springing up in the anus. From the notes of Mr. Colby we gather the following details:—

Benjamin M——, aged thirty-eight, coachman, married, was admitted into Abraham's ward, December 10, 1850, under the care of Mr. Simon, with a cancerous growth round the anus. He states that twenty years ago he first noticed a small movable tumour, about the size of a bean, in the above situation, which has increased slowly in size ever since. The patient was then led to believe that he suffered from piles, and was treated accordingly. About a twelvemonth ago, after hard riding, this tumour became larger, more painful and sore, and after a time it burst, discharging blood sometimes very freely. All the inconvenience was, however, laid to the score of piles, and the patient did nothing to relieve these symptoms until about one month before admission, when he showed it to a surgeon, who advised immediate application to the hospital.

Since the breaking of the tumour, its increase in size had been more rapid, and on examination, a large, hardened, and elevated sore, with everted edges, about four inches and a half long, and three inches and a half broad, was seen, situated chiefly on the left side of the anus. It lay close to the median line, even overstepping it, and extending over the os coccyx behind, and the perinæum in front. There was no extension of the disease to the rectum, and the motions passed quite freely; the mass was perfectly movable, and did not appear to extend deeply, being perfectly isolated from surrounding textures.

On the 14th of December, the bowels having been previously acted on by castor oil, Mr. Simon completely removed the diseased mass. The patient had chloroform in considerable quantity, and this agent induced perfect anæsthesia; the incision included the skin of the anus, as well as a considerable portion of the external sphincter, and the gap that remained after the incision was truly awful. Mr. Simon, however, brought together the divided edges of the rectum, and the skin, so as to form a new anal orifice, and the whole of the parts were, without much difficulty, placed into good apposition. The hæmorrhage was rather abundant, and the loss of blood, combined with the effects of the chloroform, produced such faintness as needed the administration of wine and cold affusion.

Hæmorrhage in operations about the anus is sometimes alarming; a very short time ago we saw a patient who was with difficulty saved by stimulants of the most potent kind, being ready to sink under the effects of hæmorrhage which followed the simple operation of dividing the sphincter ani for fistula.

The patient was taken to bed, and ice applied to the perinæum, to prevent further hæmorrhage. There was very little swelling of the parts, and no constitutional disturbance took place; the sutures were not removed until three days after the operation, and then the wound, although it gaped considerably, had a very healthy granulating aspect. No motion from the bowels occurred for six days; and on the seventh day after the operation, as some headache and foul tongue were noticed, half an ounce of castor-oil was given; this operated well, and induced very little pain or difficulty.

The patient progressed very favourably, being troubled occasionally with colic. Some narrowing of the anal aperture took place from the healing of the sore, which was nearly perfect on the forty-second day after the excision. This, however, was easily relieved by keeping a sponge tent in the rectum, and the patient now had a regular motion daily, and acquired perfect command over the aperture of fæcal exit.

On the 6th of February, about eight weeks after the operation, but a very small portion remained unhealed, and a strong solution of the acetate of lead was ordered to be applied, to hasten cicatrization. One month afterwards the sore was quite healed, the anus of its natural size, and the patient experienced no difficulty in passing his fæces. He was finally discharged, about three months after admission, in a very favourable condition.

GUY'S HOSPITAL.

Concussion of the brain; Loss of Memory; Ultimate Recovery.

(Under the care of Mr. Bransby Cooper.)

Phenomena of an interesting and withal of a practically useful character, frequently present themselves in cases where the nervous system is principally involved. Some of these phenomena are perfectly understood, others are not quite satisfactorily explained, and many are surrounded with great obscurity. Each of the three systems, the cerebral, spinal, and ganglionic, presents in health and disease features worthy of constant study and investigation; the hemispheres, the powerful encephalic ganglions, the cerebellum, the medulla oblongata, the spinal marrow, and the wonderful ganglionic chain pervading the frame, all claim by turns, conjointly or separately, the attention of the physician and the surgeon. And here the distinction between physician and surgeon is completely effaced; here the division of labour can no longer be useful; the two branches are completely blended, and woe to the patient if his adviser be deficient in either medical or surgical knowledge.

Apoplexy is in general treated by the physician, and concussion by the surgeon; but, strictly speaking, matters should be reversed; for, in the first instance, there is an actual loss of blood and subsequent pressure, and in the second, there is a purely molecular disturbance, which escapes even the searching scrutiny of the microscope. But concussion is generally

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caused by external injury, and we are therefore content that the surgeon should take charge of the case. We purpose to offer our readers a series of cases bearing upon disturbances of the nervous system, as observed both in the surgical and medical wards, and commence this day by one of the most ordinary (and not thereby less worthy of record) derangements of the functions of the cerebral hemispheres—viz., disturbance of the intellectual faculties resulting from concussion.

We find by the notes of Mr. Pavey that the patient is a strong and robust man of thirty-five, who was admitted, Oct. 3, 1850, under the care of Mr. Cooper. About an hour before admission he had fallen from the roof of an omnibus, and being taken up insensible, he was brought to the hospital in a state of collapse. The extremities were cold; the pulse weak, small, and labouring; and the pupils equally contracted. The respiration was slow, the expiratory effort accompanied by the peculiar blowing which denotes the muscular atony existing in the cheeks, and the patient was quite unconscious. No fracture of the skull or internal injury could be detected. Vomiting supervened soon after admission, and it was for a moment suspected that the patient might have been under the influence of large potations when he met with the accident; but it was ascertained, through his friends, that such had not been the case.

Mr. Cooper ordered the head to be shaved, and the patient to be sheltered from the light. Slight reaction had occurred the next day, and the bowels were freely relieved by mercurial aperients and house-medicine; but for the four following days the patient took hardly any food; he slept almost constantly; his pulse was frequent and laboured; and he turned round in bed, with an absent look, when he was spoken to.—Now and then he would give a rational reply, but at the same time appeared to avoid conversation as much as possible. When roused, he looked like a person awaking out of a profound sleep, but soon relapsed again into a state of unconsciousness. His condition had some analogy with somnambulism, for he would get out of bed and pass urine, apparently unaware of what he was doing. Eight days after admission, his mind was still so unhinged, that he rose from his bed, looked for his clothes, and told the nurse he was going home. The pulse was at the same time labouring, and the pupils rather dilated. On the fourteenth day, his consciousness partially returned; he would answer pretty quickly a question referring to his immediate condition; but when addressed on subjects where an effort of the memory is required, he stares vacantly around him, as if attempting to recollect, and at length replies that he does not know, or makes a reply which has little reference to the question. A blister was now ordered to be raised on the nape of the neck. This measure gave considerable relief, the patient improved very quickly, and on the twenty-first day was perfectly sensible and rational.

It will be recollected that we gave publicity, some time ago, to a case somewhat similar to the above. The patient was under the care of Dr. Allen, at the St. Marylebone Infirmary. Here the loss of memory was likewise well-marked, but the return of that faculty much slower. From such phenomena the observer is involuntarily led to the consideration of the state of the brain in insanity, where, for the most part, the inefficiency of some one intellectual faculty is prominently conspicuous. Here again we may have complete freedom from congestion, pressure, &c.; but it is very likely that the cerebral molecules of the hemispheres have lost their normal relations—that a concussion, brought on either physically or morally, has disarranged them to such an extent as not to allow their natural affinities to restore the mental equilibrium.

UNIVERSITY COLLEGE HOSPITAL.

Cases of Nævus, with a new mode of applying the Ligature to particular forms of these growths.

(Under the care of Mr. Erichsen.)

It will be allowed by all those who have paid attention to the improvements introduced within the last ten years in the treatment of nævus, that a considerable amount of ingenuity has been evinced by several of our hospital surgeons. We see a great many operations for the removal of these vascular tumours, and have witnessed different modes of applying the ligature to them. These methods we have duly recorded in former "Mirrors," and by perusing these descriptions, our readers have certainly become convinced that considerable strides have been made in the treatment of nævi. The variety affecting merely the capillaries of the integuments is not generally interfered with; that principally situated in the areolar tissue, and presenting an unelevated appearance, is often treated by potassa fusa, (see below.) But the ligature, the arrest of vascular supply, or attempts at a change of structure, is brought to bear upon that variety which is composed of dilated bloodvessels, raised above the surface, either pulsating or not. As to the deligation of the tumour itself, we beg to record the following cases, which illustrate the latest views of Mr. Erichsen upon the subject.

Case 1. *Nævus of the anterior fontanelle.*—A child, six months old, strong and healthy, was admitted, under the care of Mr. Erichsen, Nov. 1850, with a nævus on the anterior fontanelle. The tumour is almost as large as a pigeon's egg; it occupies the whole of the fontanelle, extending over the osseous boundaries of this space on the left side. The heaving of the brain can be distinctly felt underneath it; there is no pulsation in the tumour, but several large veins are seen running from it on each side. The mother states that she noticed the discoloration of the skin shortly after birth; it increased rapidly since that period, and almost visibly during the last fortnight.

Mr. Erichsen resolved to use the ligature, seeing the size and prominence of the growth; but the difficulty in the application of this means consisted in passing the threads across the base of the tumour without wounding the membranes of the brain, which lay in immediate contact with it. This difficulty Mr. Erichsen overcame by using a blunt-eyed probe to convey the threads, instead of the common nævus needle. A puncture was therefore made about an eighth of an inch above the tumour, and an eyed probe, conveying the whipcord, was pushed across the base of the mass. Mr. Erichsen then cut down upon its point when it projected below the tumour, and then drew it across; the transverse threads having been carried through in a similar manner: the knots were tied in the usual way, and the mass firmly and effectually strangulated: the child, having been under the influence of chloroform, suffered no pain. The threads and sloughing mass separated in three days, leaving a healthy granulating surface, which speedily cicatrized.

Case 2.—A heavy child, ten weeks old, was sent to Mr. Erichsen on May 28th, with a nævus situated, like the last-mentioned, in the anterior fontanelle. It was about as large as a walnut, and was growing rapidly. Mr. Erichsen operated in this, as in the former case, by carrying the threads across the tumour with a blunt-eyed probe through punctures in the healthy neighbouring integument. The case did perfectly well.

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Case 3.—On the same day in which Mr. Erichsen operated in Case 1, we saw him remove, by the double whipcord ligature, an ulcerated and bleeding nævus, as large as half an orange, from the back of an infant eleven weeks old. The child having been rendered insensible by chloroform, bore the operation (an extremely severe one for so tender an age) remarkably well, making a perfect recovery without any bad symptom.

The treatment of long, flat nævi, when above a certain size, is always a troublesome matter. If small, they may be readily removed, either with nitric acid, or passing threads across their substance, or by the introduction of needles, &c. We have seen Mr. Lloyd operate with great success at St. Bartholomew's Hospital upon flat nævi. The method consists in destroying the abnormal growths by potassa fusa freely applied for a few minutes. We recollect one child in particular, less than a twelvemonth old, who presented a nævus of this kind on the inner surface of the labium; the same caustic was used by Mr. Lloyd, and with the best results. But if so large and *elevated* as to require more energetic means, the surgeon often finds himself much embarrassed in the proper application of the ligature. Mr. Luke some years ago published a description of a mode of effecting this, by carrying a single thread, having several needles strung upon it, across the tumour, then cutting off the needles and tying the knots. We had the pleasure of describing this peculiar mode of applying threads, and adducing a case in illustration of the practice, in The Lancet of last year. In the following case Mr. Erichsen adopted a very simple and successful plan of accomplishing the same object, using only one needle and a double thread.

Case 4.—A child, two years old, was admitted, on the 23rd October, 1850, under the care of Mr Erichsen, having a nævus on the right side of the forehead, about two inches long, three-fourths of an inch broad, and slightly elevated above the skin. Various but unsuccessful attempts having previously been made to destroy it with caustic, Mr. Erichsen proceeded to use the ligature, which he did in the following manner with complete success:—

A long triangular needle is threaded on the middle of a whipcord about three yards in length; one-half of this is stained black with ink, the other half is left uncoloured. The needle is now entered through a fold of the sound skin, about a quarter of an inch from one end of the tumour, and transversely to the axis of the same. It is then carried through, until a double tail, nine inches in length, is left hanging from the point at which it entered; it is next carried across the base of the tumour, entering and passing out beyond its lateral limits, so as to leave a series of double loops at least nine inches in length on each side. Every one of these loops should be made about three-quarters of an inch apart, including that space of the tumour, and the last loop should be brought out through a fold of healthy integuments beyond the tumour. In this way we have a series of double loops, one white and the other black, on each side. All the *white* loops should now be cut upon on one side, and the *black* loops on the other, leaving hanging ends of thread of corresponding colours.

The tumour may now be strangulated by drawing down and knotting firmly each pair of white threads on one side, and each pair of black ones on the other. In this way the tumour is divided into segments, each of which is strangulated by a noose and a knot; by *black* nooses and *white* knots on one side, by *white* nooses and *black* knots on the other.

Mr. Erichsen thinks that this mode of applying the ligature will be found of service in all those cases of elongated flat nævi, in which, from the shape of the tumour, it is not possible to effect the strangulation by the ligature as ordinarily used, without enclosing an undue quantity of integument and thus producing a larger cicatrix than is necessary for the eradication of the disease. The ordinary double ligature, or the quadruple thread, as used and figured by the late Mr. Liston, always includes a circular mass, and hence is not applicable to those growths that are very much elongated or irregular in shape.

The following case, which we have condensed from the notes taken by Mr. Ashton, one of Mr. Erichsen's dressers, is a good example of a peculiar form of cellulo-venous nævus, and is interesting on account of the morbid action set up in the granulating surface after the removal of the tumour.

Case 5.—A child, about five years of age, came under Mr. Erichsen's care in February last, for a large tumour on the right nates. The parents state, that shortly after birth some swelling was noticed about the right buttock, but that it did not attract much attention until the child was about three years old, when it received a smart whipping from the grandmother in this region of the body. The tumour now increased slowly in size until it attained its present bulk. The integuments covering it also became mottled with purplish-red spots. No treatment of any consequence has been had recourse to for the removal of the growth.

On admission, a tumour as large as an orange is found on the nates of the right side, occupying the fold, and extending into the ischio-rectal fossa. It is very prominent, not distinctly circumscribed, and doughy throughout the greater part of its extent; but where it approaches the anus, it is of very firm consistence. The size of the tumour can be slightly diminished by steady pressure; but on the removal of the hand, its former bulk is speedily regained. It is not influenced by the child crying or struggling, and the skin covering it is mottled here and there with faint claret-coloured stains. There is no pulsation, bruit, or increased heat in the swelling.

Mr. Erichsen having diagnosed the tumour to be a cellulo-venous nævus, partially consolidated by inflammation, proceeded to remove it on the 6th of March.

Ice having been applied before the operation, with the view of lessening the vascularity of the tumour, Mr. Erichsen made a crucial incision through the integuments covering it, and reflected these to the base of the tumour, exposing a large mass, apparently composed of much-dilated and tortuous veins and cellular tissue, with a few cysts containing brownish fluid. Nævus needles were pushed across the base of this, and it was strangulated with strong whipcord.

In a few days the tumour included in the ligatures sloughed away, leaving a deep hollow from which it had been removed. The surface of this cavity and the contiguous flaps now took on a peculiar unhealthy action; instead of granulations, large greyish-white masses, looking like melted fat more than anything else, were thrown up; the flaps became swollen and œdematous, and it was feared that a malignant degeneration was taking place.

The child's general health was carefully looked to, and potassa fusa freely applied. On the separation of the sloughs produced by the use of this caustic, the same morbid condition was, however, set up again; and as the parts in the vicinity became extremely irritable, it was thought advisable not to re-apply it.

Various local applications of an emollient or specific character were now used, but none could be borne; indeed, water-dressing appeared to be the only application that did not irritate.

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The surface of the ulcer gradually assumed a healthier appearance; the flaps became less swollen; they lost the peculiar semi-transparent appearance which they had before presented, and the parts around evinced less irritability. But yet, every now and then, a tendency to a return of the former morbid appearance presented itself. This, however, gradually passed away. By the middle of May, about two months after admission, the child left the hospital, with the wound soundly and completely cicatrized, and with no appearance of disease about it.

We have lately seen a very large erectile tumour of the upper lip treated by exciting in the spongy vascular tissues, not the suppurative, but the adhesive inflammation; we hope soon to be able to bring the case before our readers. Danger of hæmorrhage is so great in these instances, and is so much dreaded by surgeons, that too much attention cannot be directed to a *safe* mode of treating large erectile tumours, independently of the deligation of the principal arterial trunk.

WESTMINSTER HOSPITAL.

Comminuted Fracture of the Upper Portion of the Humerus; Gangrene and Amputation at the Shoulder-joint, with subsequent Phlebitis of the Leg of the same side.

(Under the care of Mr. Barnard Holt.)

Mr. Fergusson, speaking of amputation at the shoulder-joint, in his work on Practical Surgery, says, (p. 262.) "..... and fortunately it is an operation so easy in its performance, and comparatively—in reference to its magnitude—so safe in its results, that under ordinary circumstances, when it is imperatively demanded, the surgeon may resort to it with the sanguine hope of a speedy and permanent recovery for the patient." These statements are fully borne out by the facts which have come under our notice; for the three operations of this kind which we have recorded have all had a favourable issue: 1, Middlesex Hospital, Mr. Moore—2, Guy's Hospital, Mr. Bransby Cooper—3, London Hospital, Mr. Curling. We have now to report a fourth amputation at the shoulder-joint, performed by Mr. Holt at the Westminster Hospital: here the recovery has likewise been good, but certain morbid phenomena of a peculiar and unusual character threatened to impede it; but they were happily controlled, and the case has done well. Of the four operations at the shoulder-joint, two were performed in consequence of diseased bone, (Middlesex and Guy's Hospitals,) and two were necessitated by injury, (London and Westminster Hospitals.) Of the two latter, the first was primary; the second, consecutive.

John O——, aged forty-seven years, a healthy farm servant, residing at Enfield, was sent to the Westminster Hospital, May 28, 1851, by Mr. Asbury of Enfield, with comminuted fracture of the upper portion of the humerus, and severe contusions to the surrounding parts. The patient stated that while attending to a restive horse he was knocked down, and the wheel of a heavy waggon laden with dung, passed over the upper part of his shoulder and arm.

Upon admission, two days after the accident, the whole limb was considerably ecchymosed, blood having been extravasated, to a very considerable extent, into the intermuscular areolar tissue around the upper part of the arm and scapula. The humerus is fractured, just below the surgical neck, and a portion of the bone lies imbedded in the pectoral muscle beneath the clavicle. The forearm and hand are œdematous, but of natural temperature; the pulse beats feebly. In other respects he is unaffected by the accident. Mr. Holt desired that the limb should be properly supported on a pillow, and cold lotions applied over the swollen part. The bowels were open and the skin cool. Beef-tea diet was ordered.

On the subsequent day the discolouration had extended from the upper part of the arm to the forearm and hand; the temperature was imperfect, but the sensation of the limb not interfered with; general health apparently good; pulse hardly perceptible in the affected arm; but of good volume, soft and 84 in number in the opposite limb; bowels open, skin cool and countenance cheerful. Mr. Holt ordered warm fomentation to be substituted for the lotion, and the addition of a mutton chop to the diet.

Upon examining the hand and arm in the evening, the former was found in a dry, shrivelled gangrenous condition, which was apparently spreading with great rapidity. Sensation was now entirely lost nearly as far as the elbow, the forearm appearing to the patient burning hot, although its temperature was actually considerably diminished; pulse in the opposite limb 98, but soft; skin warm and tongue moist. The man complains of thirst, and his countenance is pinched and slightly anxious.

Mr. Holt finding no time was to be lost, requested the opinion of his colleagues, who concurred in the propriety of the arm being immediately removed at the shoulder-joint. The patient was placed under the influence of chloroform, and the operation performed by making a flap of the deltoid in the manner described in most surgical works. Only about half an ounce of blood was lost, and that chiefly from the subscapular artery.

Several portions of comminuted fragments of the humerus were dissected from the pectoral muscle; the muscular structures generally were lacerated, contused, and considerably injected with blood, a large coagulum occupying the posterior part of the arm. The axillary artery was filled by a coagulum, but although it did not bleed at the time of the operation, it was thought prudent to disengage it from its nervous coverings, and place a ligature around it. The nerves were carefully dissected away, and the artery, together with the subscapular, and one or two muscular branches secured.

In the evening the flaps were adjusted by suture and strapping, and formed one uniform line; and to guard against excitement the patient was ordered forty minims of tincture of opium. There was not any oozing or tendency to hæmorrhage.

On the day after the operation, it was found that the patient had passed a tranquil night; countenance cheerful; skin warm and gently perspiring; tongue clean and moist; bowels open; pulse 90 and rather feeble; shoulder feels comfortable; Mr. Holt ordered a chop and four ounces of wine. The progress was very favourable up to the ninth day after the operation, when the greater portion of the wound had entirely healed. But on the eleventh day the patient complained of some thirst; the skin was rather hot; the tongue moist, but furred; and the bowels inclined to be purged; pulse 100. Omit the wine, and take barley-water and arrowroot, together with a draught containing ten minims of tincture of opium.

At ten in the evening, the man was not so well. skin more hot; pulse 120, and rather jerking; aspect slightly anxious; tongue inclined to be dry; bowels once open. Mr. Holt offered effervescing draughts with five minims of tartarized antimony wine every four hours; there is no unhealthy appearance about the stump; the small portion of the wound not healed is discharging healthy matter.

On the twelfth day the patient was somewhat better; countenance not quite so anxious; eyes dull and heavy; skin hot; tongue more moist, but he complains

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of thirst; pulse 120, and more soft; bowels once relieved. He complains of stiffness and pain in the calf of the leg of the same side, and upon examination it was found swollen and painful, together with some degree of hardness in the course of the internal saphena vein. Mr. Holt ordered the leg to be enveloped in hot fomentation; the patient to continue the medicines, to take beef-tea, and four ounces of wine in the twenty-four hours, at moderate intervals.

At one in the afternoon the calf of the leg was very tender, more particularly about the centre; in other respects the patient is in the same state. Apply twelve leeches to affected part, and continue as before.

On the third day of the phlebitic attack there was some improvement; the hardness was much the same, but the leg not so tender; considerable serous infiltration at the lower portion of the limb; it pits very perceptibly over the tibia under the pressure of the finger. On the fourth day the secretions being pale, Mr. Holt prescribed small doses of calomel and James' powder.

On the fifth day the pain in the calf of the leg had materially abated; the leg was not so swollen, but the hardness which it had presented was now transferred to the thigh, in the course of the saphena vein; pulse 120; skin perspiring; tongue clean; bowels open, and aspect cheerful. As the patient was rather low he was ordered chop, egg, beef-tea, and to continue wine. Poultice to the thigh. The case took gradually a very favourable turn. Bark, wine, and generous diet were continued. The stump cicatrized perfectly, and the patient left the hospital thirty-nine days after admission, and twenty-nine after the phlebitic attack.

The foregoing case presents many points of interest, more particularly with regard to the occurrence of phlebitis, either as a consequence of slight secondary deposit, or from accidental causes. After the limb was removed it was carefully dissected: the brachial and axillary arteries were found filled with a coagulum; no wound could be detected in the latter artery, and as the coagulum existed above where the vessel was divided, it remains a matter of doubt whether the axillary artery was wounded by a point of comminuted bone, or injured by the original cause and pressure from the displaced portions of the fractured humerus.

The success of amputating as high as possible, although the gangrene was rapidly spreading, is here well-marked, no recurrence, or even sloughing, having taken place in the wound, although the muscles were much bruised, and not in a favourable condition to offer much resistance to its continuance. Mr. Holt was of opinion that the phlebitis which subsequently ensued was dependent upon secondary deposit to a very slight extent, as the patient had not been in any manner exposed to atmospheric influences, or the subject of any injury to the leg which would have been likely to give rise to such a result.

It was very evident, from the success which attended the administration of wine, and subsequently bark, that the man's blood was not in so favourable a condition as it might have been, the idea of the phlebitis having been caused by secondary deposit being thus greatly supported. The only symptoms at all urgent, during the whole course of the disease, were the accelerated pulse and profuse perspiration, the last-mentioned symptom being, in Mr. Hodgson's opinion, a very frequent, if not almost invariable attendant upon phlebitis after injuries.

One more point of some interest might be noticed—namely, the rarity of secondary deposit in a lower limb of the same side, after an amputation so high as that of the shoulder-joint, the organs immediately incidental to life having altogether escaped.

ST. MARY'S HOSPITAL.

Lithotomy in a Child four years old; Encysted Melicertous Tumours of the Scalp.

(Under the care of Mr. Coulson.)

Our readers will perceive by the heading of this article that our nosocomial field of observation is being widened. A very populous district in the north-western portion of the metropolis will henceforth enjoy the blessing of a well-regulated home in the hour of sickness, and a certain number of our professional brethren have obtained an opportunity for the public application of their abilities, and for increasing our stock of medical, surgical, and obstetrical knowledge. We proceeded on the 9th instant to witness the first operations at St. Mary's Hospital, and shall have much pleasure in henceforth including this new institution in the clinical cycle which is performing its hebdomadal revolution in the columns of the "Mirror."

The first patient operated upon was a little boy, four years old, who was admitted July 1, 1851, into Victoria ward, under the care of Mr. Coulson. The poor little creature was suffering from all the symptoms of stone in the bladder; he passed his urine frequently during the day, and complained of pain both before and afterwards. The urine was acid, and of high specific gravity, but contained no albumen. On sounding the child, a stone could be distinctly heard. Dr. Snow having administered chloroform, Mr. Coulson operated in the usual manner, and a small stone, rather less than two scruples in weight, and composed of lithate of ammonia, was quickly removed. Very little blood was lost during the operation, and the child has not had a bad symptom since.

The following is the mode of operating adopted by Mr. Coulson:—He introduces a curved staff, and gives it to the care of an assistant, directing the handle to be inclined a little towards the ground, and the groove slightly turned towards the left side. By this inclination of the handle, the groove of the staff is made less prominent in the perinæum, but there is the advantage attending it, that when the surgeon has cut into the groove, there is no occasion to alter the position of the staff, and the fore-finger of the left hand is quite at his disposal for *protecting the rectum*, (see observations below,) and guiding the knife.

Mr. Coulson makes the first incision rather low, very little more than a finger's breadth above the level of the anus, by which contrivance he thinks the bulb more easily avoided; in fact, if the external incision is made higher up, it can be of little use to the operator, and is often slow to heal.

For the division of the prostate gland, Mr. Coulson uses the long straight knife with the beak in the middle line of the point, but he lays great stress on the opening into the bladder being small. In children, if the opening is made too large, incontinence of urine is often the result during the remainder of their lives; and in adults, death thus frequently follows from effusion of urine into the cellular tissue surrounding the neck of the bladder.

Mr. Martineau used to make the opening into the bladder very small, and then with his finger dilated the aperture until it had attained a sufficient size to allow the forceps to be introduced and carried to different parts of the bladder. His success was unparalleled, and attributed, by those who had the means of personal observation, to the small extent to which he divided the prostate gland.

We would here direct the attention of our readers to a sequela of lithotomy mentioned last year in The Lancet. From the report we learn that, two days after the operation, "some fæculent matter escapes through the catheter each time the

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passes urine or has a motion." We must therefore suppose that the rectum had been laid open, and a permanent communication with the bladder established, for the reporter states, that on the 23rd of December, 1850, nine weeks after the operation, "The old man *suffers no inconvenience* (!) from the occasional passage of fæces and flatus through the urethra." Mr. Trenerry, who reports the case, deserves the thanks of the profession for frankly publishing these results, which will certainly go far in increasing the watchfulness of operators when their knife glides along the rectum.

At the conclusion of the operation Mr. Coulson addressed the numerous medical friends who had assembled on the occasion, and in very impressive language and tone dwelt on the difficulties the original projectors of the institution had had to overcome; and he hoped that "what he had done this day would be the commencement of a long line of services which he and his colleagues would render to the poor." Mr. Coulson combated the notion that the indigent sick are by the profession looked upon as "vilia corpora," to be experimented upon, and showed that, on the contrary, the restoration of the health of those who came under his and his colleagues' care was their sole and most fervent wish.

After this short address, Mr. Coulson operated on a woman of short stature, and about fifty years of age, whose scalp presented a regular crop of meliceritous tumours. These wens were five or six in number, and varied in size from a nut to a small orange. Mr. Coulson removed the deformity by incision and evulsion of the cyst; the latter, as well as the meliceritous contents, being easily removed. It is remarkable that the patient's daughter, about eighteen years of age, who was likewise in the theatre, has already several wens appearing on her scalp. This is either a clear proof of heredity, or it may be suspected that both mother and daughter use for their hair substances which are calculated to produce obstruction of sebaceous follicles.

The removal of these growths is a measure of much greater importance than might at first sight be supposed, especially when they occur in old people. As an example we may quote the case of a man about seventy years of age, who was lately brought to Mr. Erichsen, at University College. This patient had four or five large wens on the scalp, which presented the usual appearance; but one of these had taken on ulcerative degeneration, and had fungated so largely that it now had many of the characteristics of a malignant growth; it is of the size of a saucer, raised above the surface, with everted edges, thick, fungating granulations, and abundant discharge. Mr. Erichsen thought that palliative measures only should be resorted to.

It is well known that the affection which we are now considering has in many instances laid the foundation of horny growths, which have here and there attained large dimensions. This is an additional reason for attending to wens in their early stage. Our museums present examples of such horny development, principally about the forehead. We happened, a short time ago, to see one of these among the out-patients of Mr. Erichsen, at University College Hospital. This peculiar cuticular appendage had sprung from the lower lip of a woman about forty-five years of age, and was about the size of a common clove; it had several times fallen off, the matrix being always left behind. It is very probable that the removal of the latter will effectually stop the growth.

On the same day, Mr. Walton operated upon a patient affected with exostosis of the orbit; and presented an infant, upon whom he, a few days previously, had tied the carotid artery for an erectile tumour situated behind the globe of the eye.

KING'S COLLEGE HOSPITAL.

Amputations at the Ankle-joint.

[Under the care of Mr. FERGUSSON.]

We have frequently had opportunities of seeing Mr. Fergusson perform amputations at the ankle-joint, and as it is highly important that the results of such operations should be known, and afford data for judging of the value of Mr. Syme's method, we have collected several cases which have been under Mr. Fergusson's care, and shall briefly give an outline of the same.

"It seems clear that the question, when considering this operation, is mainly this: Will a patient (and especially one belonging to the labouring class) be able to walk better and more comfortably upon the stump made by Mr. Syme's operation, than he would if the leg had been taken off three or four inches above the ankle? According to all the facts which have hitherto been recorded, as well as those of which we are going to give some detail, it would appear that the amputation at the ankle-joint yields favourable results, and that the question may be answered in the affirmative.

Surgeons can certainly not be taxed with adopting peculiar modes of operating with precipitation; in the case of amputation at the ankle-joint, for instance, many years passed before the operation got into favour, and it is now merely beginning to be firmly established, whilst Mr. Syme performed it, for the first time, full twenty-two years ago. Without dilating upon the originator's views on the subject, we may just transcribe his conclusions. 1. In the amputation at the ankle-joint, as compared with that below the knee, the risk of life is smaller; 2. A more comfortable stump is afforded; and 3. The limb is more seemly and useful for support and progressive motion. We are indebted for the notes of several of the following cases to Mr. M. A. Edwards.

Case 1. P. M——, aged twenty, was admitted Jan. 17, 1849; he had sprained his left ankle fourteen months previously; since then it had been swelled and painful, and matter had formed and discharged by two or three orifices on the outside of the joint. The patient does not complain of much pain; the motions of the ankle are very limited. The actual cautery, issues, blisters, have been applied on the inner side of the articulation, but gave no relief. There is a glandular tumour the size of an egg in the left groin.

In Feb., Mr. Fergusson removed the foot at the ankle-joint, sawing off the malleoli and about one-quarter of an inch of the tibia.

Feb. 10th.—Slight attack of erysipelas, which soon gave way; a few days afterwards, the centre of the posterior flap sloughed, leaving, however, a considerable portion on each side. The wound was covered with granulations.

On March 2nd, Mr. Fergusson removed about an inch and a half of the tibia and fibula. The enlarged gland in the thigh suppurated, and was opened.

On May 18th, the stump was healed, and turned out an excellent one; the wound in the groin was still open, and discharging, and could not be got to heal. The patient left the hospital, May. 23, 1849, about four months after admission, and died of phthisis in the summer of 1850, in the physician's ward.

Case 2.—John M——, aged twenty-one, admitted Feb. 6, 1850; had Chopart's operation performed on his left foot by Mr. Fergusson, Oct. 22, 1848. The tendo-Achillis was divided before he left, as it had a

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tendency to pull the heel up, and stretch the thin integument forming the cicatrix over the ends of the bones. When re-admitted, the heel was much raised, so that the anterior edge of the os calcis sustained the weight of the limb when he put his foot to the ground. This caused such pain that he had never used his leg in walking since he left the hospital.

On Feb. 9th, Mr. Fergusson performed Syme's operation at the ankle-joint, cutting the posterior flap shorter than it used formerly to be made. A good deal of constitutional disturbance followed the operation, and about half the posterior flap sloughed; the remains of it and the ends of the bone united by granulation, and the patient was discharged May 1st, 1850, about three months after admission.

On June 26th, 1850, the patient was re-admitted; he had been in good health since leaving the hospital, but the wound at the union of the flaps had never healed perfectly. The anterior edge of the lower end of the tibia was so badly covered, that it threatened to protrude on the slightest pressure; there was much pricking pain in it, which was worse at night; he had not put the stump to the ground since leaving the hospital.

On July 20th, Mr. Fergusson cut through the former cicatrix, and, separating the soft parts from the bones, removed portions of the tibia and fibula. The patient went out with a good stump the first week in August, about two months after his re-admission.

This young man has been seen several times since he left the hospital: his stump is very languid, of a bluish-purple, tender, and susceptible of the changes of weather. He wears a long leather boot, and his leg is gradually becoming more useful and less troublesome.

Case 3.—Amira P——, aged eleven years, was admitted May 1st, 1850. The patient, about six years previously, struck the shin of her leg against a hard substance: an abscess was the consequence of this injury; and when it had become well, another formed under the right malleolus. This second purulent collection soon extended over the dorsum of the foot, and when opened, continued to discharge copiously. Unconquerable flexion of the leg came on, and no alternative was left but the removal of the foot, the bones of which were in a diseased condition.

On the 4th of May Mr. Fergusson performed amputation at the ankle-joint, in the same manner as in the preceding cases. The patient progressed very favourably, though some suppuration took place in the sheaths of the tendons. About three weeks after the operation she had an attack of erysipelas, which did not, however, materially interfere with the cicatrization; the stump healed perfectly, and the patient left the hospital seven weeks after the operation, with a very serviceable stump.

Case 4.—Richard B——, aged thirty, was admitted June 26, 1850; he is single, a smith, and has lived the last ten years in London. Six months previously he sprained his right ankle; the next day it began to swell, and about two months afterwards an abscess formed; this was opened, and soon followed by another, which was also lanced. When admitted, the ankle was swollen, inflamed, and painful; there were two ulcers, one behind and one in front of the inner malleolus. A probe could be passed by these openings into the joint between the tibia and astragalus.

On July 20th Mr. Fergusson removed the foot at the ankle-joint, taking away the articulating ends of the tibia and fibula. For the first week the patient went on well, and the stump, though languid, was granulating and healthy. On the sixth day after the operation, the patient was attacked with symptoms of abscess in the lung; he had difficulty of breathing, and slight pain in the right side; suddenly he began to cough up large quantities of fœtid pus, and an abscess formed at the same time on the inner side of the stump, and burrowed up about two inches. Mr. Fergusson opened this, and removed some spicula of bone from the end of the tibia. After this the wound improved, and was covered with healthy granulations; but the coughing up of purulent matter continued, and he died September 4th, five weeks after the operation.

Post-mortem examination.—Lungs: The left was healthy, the right covered by tubercles, and vomicæ were scattered through its substance; near the inner side of the lower lobe a large vomica communicated by a small aperture with the pericardium, to which the lung was adherent. The heart was much atrophied; and the pericardium adherent, except on the right side, where a large abscess was situated; the walls were much thickened. Liver: Much enlarged, pale, and fatty. Kidneys: Healthy. Stump: The ends of the tibia and fibula were healthy; a large sinus, three inches and a half long, extended up by the side of the tendo-Achillis.

Mr. Fergusson considers that part of the flap invariably sloughs; but that the cases of amputation of the ankle-joint generally turn out favourable, though it is not quite ascertained whether the stumps ultimately form solid resting points. Mr. Fergusson has introduced a modification to the operation, and is now in the habit of running his knife round at the promontory of the heel, and a little higher than usual in front of the foot, for too short a flap has been known to be drawn downwards. The most desirable place for the cicatrix is the front of the joint, and this is easily attainable by the modification which Mr. Fergusson has introduced; the dissection is far from being tedious, and is very easy around the os calcis.

We had purposed referring to a fifth case, now in the hospital, and which, from a variety of circumstances, has not turned out favourably. It was likewise our intention to mention some amputations at the ankle-joint performed at the London Hospital; but the extent of the foregoing reports will prevent this, and we must, for a little while, defer the completion of the subject.

Aneurism on the Common Carotid Artery; Deligation of the Vessel; Death.

[Under the care of Mr. Fergusson.]

Our readers may remember that the carotid artery was tied some months ago, with perfect success, by Mr. Johnson, at St. George's Hospital. The deligation of the vessel was here undertaken for the sake of commanding hæmorrhage from the interior of the mouth, brought on by the thrust therein of the point of a parasol. The boy did extremely well, and presented none of the cerebral symptoms which are said sometimes to follow the interrupted supply of blood to the brain.

We have now to put upon record an operation of the same kind, performed upon an adult, for the cure of an aneurism of the carotid artery. Though many methods have by turns been proposed to procure the obliteration of the sac,—as pressure, injection, and galvano-puncture, the results have been so unsatisfactory, that the only means likely to afford permanent relief is the deligation of the vessel on the cardiac side of the tumour. Such deligation seems, however, somewhat hazardous, when so important a trunk as the carotid artery is to be tied; but the cerebral disturbance which might naturally be looked forward to, is in fact very seldom noticed.

It is well known that we are indebted to chance for the discovery of the innocuity of this operation: a

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surgeon wounds the carotid whilst removing a scirrhous tumour from the side of the face, and to save his patient's life, he ties the vessel, and the case does well. Abernethy was the first, in this country, who attempted the operation; Fleming followed his example, and the deligation of the carotid artery soon became an established and acknowledged operation in surgery. The vessel has been several times tied for the cure of aneurism by anastomosis, or erectile tumours in the cheek or eye: Mr. Travers, Mr. Dalrymple, and Mr. Wardrop, have successfully operated in this country in cases of this nature.

When the deligation is undertaken for the cure of aneurism, it is of course very advantageous that the tumour should be so situated as to allow of the ligature being applied in that portion of the course of the artery which offers the greatest facility for such operation—viz. in the upper triangle of the neck. But aneurismal tumours are sometimes situated so low down, as to leave but very little room between their lower border and the clavicle; here the dissection will of course be longer, and the whole operation require much caution. Dr. Robertson, of Edinburgh, operated in a case of carotid aneurism where the sac was situated low down, and the tumour had burst into the œsophagus; he made his incision to the internal side of the sterno-mastoid muscle only one inch in length, and succeeded in securing the vessel. Mr. Fergusson had to surmount a difficulty of the same kind, as the tumour came close to the clavicle; the artery was, however, laid bare and tied, after a careful dissection, which presented more than usual difficulty.

Mary S——, aged thirty-eight, and unmarried, was admitted June 11, 1851, under the care of Mr. Fergusson, with a swelling on the left side of the neck, presenting several symptoms of carotid aneurism. The patient has generally enjoyed good health, but has led a dissipated life, and endured great privations. None of her family have suffered from diseased arteries or aneurism. About eighteen months ago she was under treatment at the Westminster Hospital for gangrene of the toes, induced by exposure to wet and cold during two days and nights. Six months since, the patient began to cough, and to experience difficulty of swallowing; about the same time she likewise noticed a small swelling in the course of the carotid artery on the left side, which, however, gave her no pain. The swelling gradually increased to its present size, and the function of respiration became more and more impeded.

On examination, a tumour, about the size of a small fist, tense, pulsating, and tender to pressure, was noticed on the left side of the neck, over the course of the carotid artery. It extended from the base of the jaw nearly to the upper border of the clavicle. No morbid sound of the heart could be detected, but a distinct bruit was heard in the tumour; the general arterial system seemed healthy. The breathing was very difficult. On the third day after admission, the patient became very low and weakly; the dyspnœa was great, as the tumour seemed to press somewhat against the trachea and larynx. The skin over the swelling was becoming very red and tense.

Mr. Fergusson examined the patient just before proceeding with several other operations; and finding her with so much difficulty of breathing, and the tumour threatening to burst, he determined to tie the carotid artery on the cardiac side of the tumour. The patient had become suddenly worse, and this circumstance necessitated prompt measures; but it had been Mr. Fergusson's intention to use appropriate internal remedies before undertaking the operation—a precaution which would certainly in many instances be extremely useful.

No delay could, however, intervene in this instance, for there was every probability of the tumour bursting outwardly, as it presented a highly inflamed spot, or the patient dying from suffocation. When she was brought into the theatre, the question arose whether, in her weak state, the patient should inhale chloroform. Mr. Fergusson thought that the anæsthetic agent should be administered, but with great caution.

When the patient was completely insensible, or nearly so, and the head slightly raised, Mr. Fergusson commenced with a longitudinal incision, about three inches long, to the inner side of the mastoid muscle, from the lower portion of the tumour down along the upper end of the sternum. After the cellular tissue, fascia, and platysma had been divided, the sterno-mastoid came into view, and as here the vessels lay very deep, Mr. Fergusson cut this muscle across. The sterno-hyoid and thyroid were now carefully divided, as well as some loose cellular tissue, and the sheath of the vessels was perceived. This was cautiously opened upon the director, and the aneurism-needle passed round the carotid artery from without inwards, when the vessel was well secured by a strong thread. Temporary tightening caused the pulsations of the tumour to cease, and when this had been ascertained, the ligature was finally fixed, and the lips of the wound brought together by suture.

No cerebral symptom became manifest after the deligation of the artery, but the pulsations of the radials became much slower; the breathing, which had been very laboured, regained some vigour, and the patient was removed in a comparatively satisfactory state.

Mr. Fergusson took occasion to remark, that he had not expected, when the patient was admitted, to operate so soon, as he intended to afford her eight or ten day's rest and appropriate treatment; but the disease had progressed so rapidly, inflammation had set in so quickly, and the dyspnœa was so great, that if not interfered with, the tumour would have burst either internally or externally. On consultation with his colleagues he had expressed his conviction, and they had agreed, that the vessel should be tied forthwith, though the space between the clavicle and the lower portion of the tumour was very short. The aneurism was probably situated on the upper part of the common carotid, or just at the bifurcation, but to know the exact position was not important as regarded treatment.

He (Mr. Fergusson) had made his incision very long, reaching even over the sternum, as the vessels lie so deep in this locality that plenty of room is very necessary, and on this ground he had divided the sterno-mastoid muscle without hesitation, the more so as this operation is one involving life, and that a muscle was of little importance in comparison. Mr. Fergusson had been somewhat apprehensive of the small veins in that region, in direct communication with the veins of the neck, but the hæmorrhage had altogether been trifling; the jugular vein was not seen at all. The best and only step had now been taken for the patient's safety; she might, however, now die from the bursting of the sac either externally or internally. A favourable circumstance in the operation was, that the patient had a rather long neck, and was very thin.

At four o'clock in the afternoon the effects of chloroform had been recovered from, the breathing was more regular than previous to the operation, but there was an accumulation of mucus in the air-passages which the patient could not force away. She was given squill and hyoscyamus in camphor mixture. At seven in the evening respiration was still less embarrassed, the pulse 90, the tumour slightly diminished in

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size, and very tense; but towards three o'clock in the morning the patient was seized with a short convulsive fit, and died soon afterwards, without any previous impairment of cerebral influence.

On a post-mortem examination the parietes of the heart were found very thin and weak; the arterial system immediately above that organ did not exhibit any striking alteration, except the abdominal aorta, where abundant atheromatous deposit was found; the other organs of the chest were healthy. The ligature was firmly fixed, and situated about an inch and a half below the tumour; the latter was filled with coagulum and soft fibrinous masses, and was situated opposite the thyroid body, extending as high as the os hyoides. The aneurism was of the description in which all the coats of the vessels had originally been equally distended: the opening of the artery into the lower part of the sac was smooth and round, and continuous with the walls of the tumour; the upper aperture was about of the same kind, having a slight valve added to it, and the carotid artery, at its emergence, was only half the calibre of the portion which was seen entering the sac. The whole of the latter lay on the left lobe of the thyroid body, on the trachea and œsophagus, these organs being evidently compressed by the tumour.

The vagus nerve, imbedded in the walls of the sac, was seen entering and emerging from these walls, close to the artery; in gently pulling the nerve above and below, its outline could be seen tightening along the parietes of the sac. This peculiar disposition of the vagus may be looked upon as greatly conducive to the intense dyspnœa from which the patient suffered.

The diagnosis of this case did not offer difficulties of a serious nature, but it will be conceded that too much care cannot be bestowed upon the recognition of the actual nature of the disease; for it is principally in the neck that tumours and abscess may simulate aneurism. Enlarged glands are especially liable to create deception; but it is seldom that the thrill communicated to the hand, or the bruit conveyed to the ear, are so distinct as in true aneurism, as was observable in the foregoing case. The full dilatation of all the coats of the vessels took place in a comparatively short time, six months only having elapsed since the patient perceived the swelling; for such cases as the one related by Mr. Hodgson, where a femoral aneurism destroyed an old man in three weeks, are certainly very rare. It will be perceived that Mr. Fergusson's patient was a female: we need not point out how seldom aneurisms affect women, this fact lending, as we venture to think, much weight to the supposition that violent exertion has much influence on the formation of aneurismal tumours, where vessels are not in a sound state.

Ovarian Tumour; Puncture of the Cyst. Death.

[Under the care of Dr. Budd.]

That the two little bodies placed at the extremities of the Fallopian tubes are to be reckoned among the most important organs of the female frame, becomes clear, when the phenomena connected with them in health and disease are carefully considered. As to their healthy functions, our modern physiologists have given us the most attractive, and, withal, the most philosophical account, as they make these functions harmonize so beautifully with the "ab ovo" theory; and as to their morbid manifestations, we have the most painful, dangerous, fatal, and extraordinary diseases connected with them. Nor are these interesting organs exempt from sub-acute inflammation, leading not to an actually fatal termination, but to a train of peculiar symptoms, so well described by Dr. Tilt in his late work on the subject.

The affection which is now to fix our attention is that distressing degeneration known under the name of ovarian tumour. The remedial means to be used in this disease have given rise to very animated controversies; the supporters of compression, of evacuation either by caustic or the trocar, of complete extirpation, and of non-interference, have by turns had their day, the question of extirpation being still pendent. For details we refer our readers to the various works on the subject, as well as to the pages of this journal, and shall merely remark, that the therapeutical means advocated in ovarian dropsy are, as happens in various other instances, more of an empirical than a scientific nature. When we shall have succeeded in penetrating the original cause and working of the abnormal vital effort and molimen of the ovary, which leads eventually to the sad disease under consideration, we shall, perhaps, be able to fix upon certain preventive means which might lessen the number of victims of ovarian dropsy.

There is one circumstance connected with the subject which should first be carefully investigated—viz., whether ovarian tumours spring up in the larger of our domestic animals, and if so, in what circumstances and proportion. It is from our veterinary friends that we expect to be enlightened; and from such data, investigations, based upon our social system and the age of the sufferers, might be advantageously instituted.

The case we have to record offers a strong example of the extraordinary energy displayed by the ovarian textures in this unfortunate degeneration, and of the age which is the most liable to such attacks. We are not aware that any author ever attempted a comparison of the morbid changes to which the testes and ovaries are liable; would not such researches throw some light on the obscure subject? We must not enter upon details without stating that the patient afforded the most exquisite instance of patience and resignation in suffering: the fatal tendency of the disease must have been evident to her, and the pain was almost incessant, yet she hardly ever complained, and seemed anxious to conceal her distress rather than to seek sympathy. We hardly think this statement irrelevant, as we heartily side with those who, by the bedside, pay no less attention to mental than to bodily symptoms.

Ann P——, aged twenty-two, a servant, who has not enjoyed good health for several years, was admitted Nov. 25, 1850, under the care of Dr. Budd. The catamenia have always been irregular with regard to time, since they first appeared; they were ever small in quantity, and the function was accompanied with pain. About twelve months ago the catamenia became more regular, until the last nine weeks, when they ceased altogether to appear. The patient has been frequently subject to leucorrhœa. Her present illness began about a year previous to admission, with pain over the right side of the abdomen and sacrum, together with scalding when she passed water, without, however, any constitutional disturbance. About this time she observed a small indurated mass in the right iliac fossa; this continued in the same state till about two months ago, when the pain and scalding gradually became worse; she was obliged to pass urine very frequently, and observed that the abdomen began to enlarge at the lower part, and towards the right side. The swelling continued to increase, and a fortnight before she came into the hospital she had applied as out-patient.

On admission she complained of a constant dragging pain over the region of the bladder, extending round the right side to the sacrum; she is obliged to micturate very frequently, but the urine does not escape involuntarily; during the night she is obliged

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to evacuate the bladder two or three times; sleeps well; appetite good; rather inclined to constipation.

On examination, the abdomen is found much swollen, a tumour of great size occupying the whole anterior portion; this tumour is dull on percussion, the dulness extending entirely round the right side. Urine slightly acid; it contains neither albumen nor pus.

Dr. Budd considered that this patient was suffering from encysted tumour of the right ovary. On December 31, being about six weeks after admission, the pain of the abdomen and the tumour had increased, and the distention now involved both sides almost equally. The patient experiences a darting pain in the right breast at the same time that the pain is felt in the abdomen; there is slight difficulty of breathing when she lies down. Diuretics and sedative medicines had been given from the first, and on May the 2nd, being six months after admission, she began to suffer from fits of vomiting. Alkalies and morphine were prescribed, but the swelling of the abdomen increased greatly, and was causing her considerable pain and difficulty of breathing.

Brandy was now given, yet two days afterwards she was in a very low state; vomiting was constant; everything she took was immediately rejected; no appetite, great thirst and headache, and great weakness; great pain in the abdomen, and tightness across the chest; considerable purging. Bismuth, chalk, and morphine, were now tried.

On the 7th of May, being, as above stated, six months after admission, Dr. Budd, considering that tapping might afford her some relief, though he for some time past had considered the tumour as partly malignant, requested Mr. Partridge to perform the operation. Mr. Partridge introduced a trocar into the tumour, about two inches below the umbilicus, and in the median line. About a gallon of thick fluid was obtained. Two large bandages were placed firmly round the abdomen, and gradually tightened. The first part of the fluid appeared to contain a considerable quantity of sanguineous-looking matter, but the greater portion was more like strong beef-tea. On analysis is was found highly albuminous, and contained a quantity of epithelial debris, granular cells, and some cholesterine.

The operation seemed to relieve the patient; the breathing became easier, and the pain much less. She vomited a little during the night, and slept well; she however complained of thirst and headache: brandy and a little jelly were ordered, as she could take nothing else; effervescents and a mercurial purgative. On May 9th, two days after the operation, she experienced great difficulty in passing water. Dr. Budd ordered opium at night. On May 12th the vomiting was more severe, the pain in the abdomen increased, and the tongue became very brown. The wound in the abdomen began, however, to heal, and discharged very slightly. Opium and creosote were continued, but on May 18th, eleven days after the tapping, she died, having suffered much pain, and sinking very gradually.

On a post-mortem examination, a large cyst was found occupying the whole of the lower portion of the abdomen; it had sprung up from the right ovary, which organ could no longer be distinguished. The cyst had not formed very firm adhesions, and being removed, and examined by Dr. Salter, Physician's assistant to the hospital, it was found to present the following appearances:—

The tumour was of sufficient size to contain about two gallons of liquid; the external surface was pale, though slightly vascular, and smooth from its peritoneal investment. In some parts the outer aspect of the tumour was quite even, in others, irregularly nodular, from the projection of cysts of various sizes embedded in its walls.

When cut into, this extensive sac was seen to consist primarily of four or five large cysts, the largest forming at least half the tumour, and the smallest being about the size of a hen's egg. These cavities were further subdivided by walls or septa projecting into them, some so far as almost to divide them into several separate cavities. These might be called the primary cysts; their inner surface was thickly studded all over with smaller, secondary cysts, ranging from the size of a pigeon's egg to that of a pin's head. These cysts clustered closely one upon the other, so as to give the whole of the inner surface something the appearance of a hen's ovary, with the ova in different states of development.

The walls of the lesser cysts, and of the most projecting parts of the larger ones, were thin; but in some places, where the smaller cysts were clustered closely together, they formed fleshy masses of two or three inches in thickness. All these cysts, large and small, were filled with fluid; in most of them it was viscid and ropy; in some gelatinous; in others, limpid; and in others again, concrete, and almost solid; the colour varying from that of dark glue or coffee grounds to white.

When examined by the microscope, these fluids were seen to contain a great number of cells: some were apparently altered epithelium, some resembling lymph-corpuscles, some hardly distinguishable from pus-globules, many of them, however, not being reducible to any recognised form. Besides these, there was a great deal of amorphous granular matter, some cholesterine, and an abundance of small acicular crystals, resembling lithate of soda, scattered singly or clustered in radiating masses.

The walls of the cysts consisted of fibrous tissue, more nearly approaching white fibre than any other, but not identical with the ordinary healthy tissue.

LONDON HOSPITAL.

(*Umbilical Hernia in an adult. Bourjeaurd's Belt.*)

(Under the care of Mr. CURLING.)

HOSPITAL surgeons are fully aware that a great many of the cases of strangulated hernia which they operate upon, illustrate a strange amount of indifference and neglect on the part of patients. The risks incurred by carelessness are hardly suspected by persons affected with hernia, and they would certainly attend more earnestly to the compressing instruments were they able to judge of the injury they are doing to themselves in using them irregularly. With umbilical hernia, which is so frequently noticed in infants, the responsibility lies with the parents; and the duty of attending to this affection is the more imperative, as there is a very fair prospect, when pressure is carefully applied, of completely removing the defect. That the disease is often met with, is apparent, from the following passage in Sir A. Cooper's work on hernia:—"If I had followed the order of frequency of occurrence in my description of the several species of hernia, I should not have hesitated to place the umbilical next in order to the inguinal."

That great care should be bestowed on the choice of a compressing apparatus is allowed on all hands, for circular pressure applied without due regard to the contents of the abdomen, may substitute the evil of inguinal hernia for that of the umbilical protrusion, which the pressure was intended to remedy. But with children difficulties of various kinds present themselves: the varying size of the abdomen at different periods of the day, the frequent fits of crying, the delicacy of the structures to be acted upon, the

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unavoidably frequent ablutions, the impossibility of ascertaining the patient's sensations, &c., are but a few of the obstacles which lie in the surgeon's way. The latter, therefore, is disposed to receive with gratitude the assistance of those who, accustomed to mechanical contrivances, aid him in the attainment of his end. We were involuntarily led to the foregoing reflections whilst seeing a new apparatus for umbilical hernia, devised by Mr. Bourjeaurd, which was applied upon a patient of Mr. Curling, and we proceed to give a short account of the belt, being anxious to acquaint our readers with the trials made in the metropolitan hospitals.

The patient is sixty years of age, and was admitted June 16, 1851, into Harrison ward, under the care of Mr. Curling. For several years past the man has been affected with umbilical hernia; no effectual means were resorted to, and he presented himself in order that some relief might be afforded. The tumour was found to be of the size of half an orange; one portion could easily be returned, but the other, which probably was omentum, was irreducible. It was evident, that a compressing apparatus was the only means of forestalling any unpleasant consequences, and of diminishing the present uneasiness; but the ivory hemisphere in common use being plainly inappropriate to the case, Mr. Curling requested Mr. Bourjeaurd to prepare for the patient one of his elastic belts, provided with an air-pad. It answered extremely well, and when the man left the hospital, a week after its application, he stated that he had never experienced such comfort in his life.

The apparatus is composed of a broad belt of vulcanized Indian-rubber, about twelve inches broad, in which the elastic webbing is, according to Mr. Bourjeaurd's method, disposed in distinct circular or spiral bands, about half an inch wide. These being sewn together, produce a gentle, continuous, and permanent pressure, and always afford an equal amount of support to the patient, whatever posture he may assume. This belt draws on with great ease, and adheres perfectly to the waist. In order to give some more support posteriorly, Mr. Bourjeaurd has adapted vertically two flexible and somewhat resisting bands running on either side of the spinal column, so as to take off a portion of weight from the anterior part of the abdomen, these bands yielding to any movement of the trunk backwards.

The most ingenious and useful portion of the apparatus is a pad, filled with air, which is fixed to the internal aspect of the belt, exactly opposite to the umbilical protrusion. The air-pad is shaped for each individual case, according to the size of the ring, upon the circumference of which it exercises a gentle and constant pressure. The pad being sufficiently yielding, a portion of it insinuates itself into the ring, while the remaining part of it presses, without undue force, on the surrounding skin and muscular structures; and the vitality of the latter is thereby not destroyed, as happens under the pressure of hard bodies. The great desideratum was to afford the patient wearing this belt the faculty of increasing or diminishing the pressure at the various periods of the day, when such changes are necessary. This is effected by means of a semi-elastic strap, fixed on the external portion of the belt, and running round the latter exactly over the air-pad. Thus, by tightening or loosening this strap, the patient may regulate the pressure as he pleases.

It is plain that breathing and coughing will be accompanied by no uneasiness with this belt, as the sac, in any violent effort, does not come into contact with a hard substance, as, for instance, ivory, but with a yielding though sufficiently resisting surface. This belt seems, then, to combine great advantages, and to be superior to the steel springs in general use; for it seems to act in a more uniform and extended manner than the spring which presses on two points only.

That the faculty of moving the body in various directions was appreciated long ago, is evidenced by the improvement introduced by the late Mr. Hey, of Leeds. It is well known that this instrument is composed of two semi-circular springs, the front end being fastened by a brass vertical hinge to a small plate of thin steel, which supports the pad. The pressure of the spring keeps the pad closely applied to the umbilical region, while the hinges which unite them to the steel plate impart all the flexibility which is necessary for the accommodation to the various motions and attitudes of the body. It appears to us that the elastic belt and air-pad will attain that end in a much more easy and certain matter. Ivory hemispheres, either retained by springs or straps of adhesive plaster, as recommended by Sir A. Cooper, must act too powerfully, and be very troublesome with children: nor can a radical cure be easily obtained, as the vitality of the part is too harshly interfered with; but it has been stated to us that the continuous gentle pressure of the air-pad and elastic belt has, in several instances, brought about, in young subjects, a permanent occlusion of the abnormal umbilical apertures.

Popliteal Aneurism; Compression of the Femoral Artery; Recovery.

(Under the care of Mr. Nathaniel Ward.)

It has frequently fallen to our share to put upon record cases of external aneurism, in which compression, as revived by Dr. Bellingham, and advocated by Irish surgeons generally, failed to promote the consolidation of the tumour. The want of success was mainly owing, as far as we can judge, either to the irritability of the patient, to imperfect instruments, or to a pressure somewhat too powerfully applied. At last a case of popliteal aneurism has occurred, in which compression, persevered in for a comparatively short time, has been followed by complete success. This is the only instance which has of late come to our knowledge, of favourable results obtained by compression in charitable institutions; but it should be recollected that two cases were lately reported in this journal by Mr. Parratt and Dr. Briscoe, of the Royal Ordnance Hospital, Woolwich, (Jan. 4, 1851,) where compression was followed by the most satisfactory results.

In one of these the tumour was situated at the commencement of the lower third of the thigh, and Bulley's spring tourniquet was applied over the artery *above* the tumour. (In the groin!) The instrument had the advantage of two pads, which were alternated every half-hour the first five days, and then every two hours. Seven days sufficed to stop the pulsation of the tumour. In the second case the aneurism was situated on that portion of the femoral artery where the vessel enters Hunter's canal. The same apparatus, somewhat enlarged, to suit the patient's size, was applied, and if we do not mistake, remained for thirteen days or thereabouts, when the pulsation of the tumour was much diminished, and three days afterwards there was no impulse whatever in the tumour. The instrument was finally removed three days after this, and the patient discharged twenty-six days subsequently.

It is to be remarked that, in this second case, "the pressure employed at first was such as only to diminish the flow of blood through the artery, but not entirely to impede it; and at each morning visit it was gradually increased, but frequently during the day it had to be relaxed for a minute or so at a time, as the pain occasioned was considerable."

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These two cases are extremely instructive, and we will just mention another, which is likewise replete with practical value. It is reported in the London *Medical Gazette* for April, 1851, by Mr. Paget, under whose care the patient was placed. The aneurism was situated in the popliteal space, and Dr. Carte's instrument, with two tourniquets, was used. The patient (twenty-seven years of age, and a surgeon) bore it only nine hours; it was re-applied two days afterwards, and kept "on some point of the artery" for a month. After this date, Dr. Carte's instrument was laid aside, as it gave great pain. Italian tourniquets were substituted, "and when one place grew tender, another was chosen." The patient remained eleven weeks in bed, and left off the apparatus before the pulsations had ceased; and strange to say, two months afterwards, they disappeared spontaneously.

Mr. Paget, in the very judicious remarks appended to the case, states, that the aneurism being of the variety called by Mr. Luke the tubular, was probably the cause of the pressure being so long ineffective; and concludes, that he could not advise patients to submit to such a long ordeal, though he renders full justice to the advantages which compression holds out.

Finally, we should not omit to state, before putting Mr. Ward's case on record, that a patient affected with popliteal aneurism is at the present time, being treated by compression at the Westminster Hospital. We shall not fail to acquaint our readers with the results of this new attempt of putting the new method to a fair test. We offer no apology for giving the following report at some length; the subject is one of great interest, and should be studied with great minuteness.

A healthy-looking and temperate Irishman, aged forty-five years, a lighterman by occupation, came under Mr. Ward's care, on the 6th of May, 1851, with the right popliteal space occupied by a well-defined, strongly-pulsating tumour. The latter was about the size of a small orange, and rendered the posterior boundary of the space convex and prominent, and it likewise caused the integument to protrude internally and externally. In the latter direction, it formed a convexity in front of the tendon of the biceps muscle, which was more marked than in the former. The extent of the tumour was easily defined by the fingers, its surface was smooth, and the sac gave to the touch no evidence of being otherwise than of uniform density. It expanded with each impulse of the femoral artery, and a loud *bruit de scie* was heard with each dilatation.

During the state of distention of the tumour, the right limb measured around the knee, immediately above the upper part of the circumference of the patella, fourteen inches and five-eighths; during its contraction, when the current of blood had been stopped by pressure made on the femoral artery in the groin, the measurement was fourteen inches and a half. The surface of the limb was warmer to the touch than the left, particularly in the neighbourhood of the knee-joint, a little below it. The right leg was somewhat swollen, and measured round the calf fourteen inches and a half; the left gave twelve inches and a half. The posterior tibial artery of the affected limb pulsated less strongly than that of the left. The anterior tibial arteries could not be felt beating over the ankle-joint, from their being in all probability more than usually overlapped by the extensor proprius pollicis. The anterior malleolar branch of the fibular artery, in both limbs, was more than usually developed, and pulsated very distinctly; the right more than the left. Several small superficial veins were observed in a state of distention around the inner part of the knee-joint, and the upper and inner part of the leg. Similar vessels were not remarked in the other limb. The pulse was 60, and regular; the heart's sounds and action normal.

The patient stated that about three weeks prior to admission, "he knelt down for about a quarter of an hour to clean about deck, and found that he could not get up without difficulty, and had a job in straightening his knee." On getting up he detected a small swelling in the ham, which was free from pain for about a week; pulsation in it did not attract his attention. He continued at work on board a lighter for three weeks after the above-mentioned circumstance, continuing to move heavy weights; and for two or three days before Mr. Ward saw him, the patient had been more than usually occupied. His leg had now commenced swelling, and appeared red, and it was on this account that he consulted Mr. John Hewitt, the tumour itself not appearing to have given the patient much anxiety. Mr. Hewitt detecting the nature of the case, at once sent the man to Mr. Ward.

The patient was placed on the middle diet of the hospital, which consists of four ounces of meat with potatoes, five days in the week; on the other two days of vegetables and soup. The patient was requested to take as little fluid as possible, and the beer usually allowed was omitted. He was kept perfectly quiet in bed for nine days, during which time an occasional aperient was given.

A femoral truss was then applied to the artery on the groin, the pad of the truss being connected to the extremity of the bow by a screw, which could increase or diminish the pressure exerted on the vessel. It acted, however, but imperfectly, and it was laid aside for another, which fulfilled the indications no better. The result, however, of the slight pressure which had been exerted by the two instruments during a fortnight, was an evident diminution in the size, impulse, and throbbing sensation of the aneurism.

Dr. Carte's new instrument (a full description of which will be found in Mr. Tufnell's recent work on the treatment of Aneurism by Compression) was now had recourse to. The night prior to its application, the groin was carefully shaved, and dusted over with French chalk, and the apparatus was applied on June 3rd, according to the directions given by Mr. Tufnell.

The patient was ordered a scruple of acetate of potash three times a day, and half a drachm of compound jalap powder every other morning. The mattress on which he was placed was firmly fixed to the bed frame, the sheets and pillows being also attached by means of bandages. Prior to the pad of the instrument being applied to the groin, the leg was slightly flexed on the thigh, and the latter on the pelvis; the entire limb was then somewhat everted, and made to rest on the outer part of the knee-joint, upon a square well-stuffed pad, which was fixed so as not to slip. At the bottom of the bed a large pillow was secured by bandages, and served as a "*point d'appui*" for the feet, so that by this means the man was unable to glide; and a large cradle was placed over the body, in order to prevent the bedclothes interfering with the proper action of the instrument.

For twelve consecutive days—viz., from the 3rd to the 15th of June—Dr. Carte's instrument was made use of, and the femoral artery compressed on the pubis; the pressure, however, being never so great at any time as to stop the impulse in the tumour, and being entirely remitted when pain was complained of.

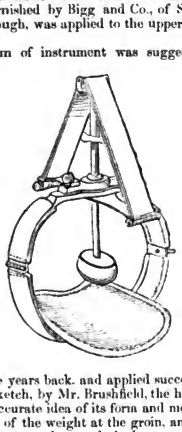
Mr. Ward expressed the belief that with the aid of a circular thigh compressor, Dr. Carte's instrument would have brought about a cure; but from the circumstance that the pelvic apparatus slipped somewhat, and that the perpendicular side-rod of the instrument was rather too long and not firmly grasped at certain

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parts by the pinching screw, the pad could be adjusted but for a short time, and was ever slipping. The apparatus was consequently laid aside for the requisite alterations. During its application, however, evident progress had been made; for on the sixth day after it had been used, the patient felt a burning sensation all down the thigh, leg, and knee. The impulse of the tumour had sensibly lessened, and it felt harder and denser to the touch. These satisfactory symptoms continued till the day on which the instrument was laid aside, on the night preceding which, the man had moreover experienced a peculiar sensation along the lower and anterior part of the thigh, as if something hot had been thrown over him, and likewise a crampy feeling in the tumour.

In the afternoon of June 15, being twelve days after the first application of the instrument, a pressure of a six-pound weight (an ordinary meat weight with a ring at the top) was applied to the femoral artery over the pubis. The skin over the vessel, which had become very red and tender to the touch was carefully dusted over with French chalk, and covered with a piece of lint, and a box-wood pad. The patient bore this weight without much inconvenience, and, with a gentle application of the hand, the weight was quite sufficient to check the sensible impulse in the aneurism. It was kept on the groin for an hour and a half, at the end of which time a circular thigh-compressor, furnished by Bigg and Co., of St. Thomas's-street, Borough, was applied to the upper third of the thigh.

This form of instrument was suggested by Dr.



Carte some years back, and applied successfully. The annexed sketch, by Mr. Brushfield, the house-surgeon, gives an accurate idea of its form and mode of action.

The use of the weight at the groin, and the instrument, were now alternately had recourse to, a four-pound weight, however, now and then, being substituted for the use of the six, and applied at the same time as the aneurism compressor, which latter was then so arranged as to exert but a moderate amount of pressure compared with that employed when acting by itself.

The patient, having been induced to take a personal interest in the principle and practice of the treatment, regulated the pressure himself without any difficulty. The circular compression was employed more than the weight, but neither the one instrument nor the other was kept applied more than an hour and a quarter, at the most.

At night time, when the patient felt inclined for sleep, the compressor was in the first instance had recourse to, and when the application of the pad of this instrument caused uneasiness, and he happened to be dozing, he woke up and adjusted the weight to the groin, and then relaxed the compressor.

This line of treatment was kept up without intermission for five days; the aneurism became consolidated on the third day after its application, pulsation stopped, and the bruit was no longer audible. During this interval the following symptoms were observed:—

June 16th, (first day.)—The tumour is less in size, and much more solid, but very tender on pressure; a small artery can be felt pulsating over the inner condyle of the femur. Temperature at the right knee, 87°; at the left, 86°.

17th, (second day.)—At twelve o'clock last night, a cutting pain in the shin-bone, lasting about two minutes; at two in the morning, a sudden burning heat along the anterior and outer part of the thigh.

18th, (third day.)—Slept but little last night; pain in the shin came on, and lasted about an hour; at five in the morning felt a cramp about the knee, and six hours afterwards the patient says that all pulsation ceased. None can be detected in the tumour in the posterior tibial artery. Two superficial vessels are detected pulsating at the inner side of the knee; the one two inches, the other two inches and a half, from the side of the patella.

On the first day after the tumour had ceased to pulsate, another small vessel could be felt pulsating on the outer side of the knee-joint, one inch in front of the biceps tendon.

On the second day, a small artery could be felt feebly beating over the centre of the tumour, with about half the force of those by the side of the knee; and on the seventh day the patient had the sensation of a needle darting through the back of the thigh one or two inches above the tumour; this occurred three or four times.

Nine days after the pulsation in the tumour had ceased, the patient was permitted to get up from bed for a few hours, and on the day following he kept up for five hours. During this time he walked at intervals on crutches, the leg bent at an obtuse angle with the thigh, and the limb supported by a bandage passed round the neck and sole of the foot.

From this time the man made rapid progress, the bandage was laid aside in a few days, and he walked without difficulty, but slowly, in about a fortnight. The foot and leg became a little swollen towards night, though the œdema regularly subsided in the morning.

The patient left the hospital on July 19th, about one month after the application of the weights and Bigg's compressor; the tumour in the ham being not larger than a lime, and so firm, that a gentleman, who was unacquainted with the history and progress of the case, said that it gave him the idea of being a fibro-cartilaginous exostosis from the back of the femur.

The pulsation in the posterior tibial artery had returned, but was very feeble; the femoral could be traced beating as far as Hunter's canal. The patient was directed to remain quiet for a week, and then to resume his duties with caution.

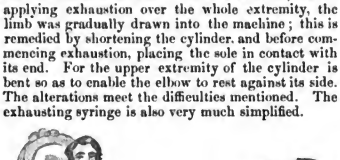
Honorary Distinctions offered to M. Ricord.—This indefatigable labourer, in his special branch of surgery, has lately received from the Sultan the order of the Nichan, the cross of which, set with diamonds, is extremely valuable. The king of Spain has likewise wished to acknowledge the merit of M. Ricord, and has sent him the order of Charles III.

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New Inventions
IN AID OF THE
PRACTICE OF MEDICINE AND SURGERY.

Dr. Junod's Exhausting Apparatus.

In 1838 we had occasion to introduce to the notice of the medical profession, an apparatus contrived by Dr. Junod, for the purpose of producing a vacuum over certain portions of the body. It was then stated that several important effects had been produced, and among them the power of occasioning syncope at will, and thereby inducing the condition most likely to arrest inflammation, without the loss of power consequent upon the abstraction of blood. At that time there were certain slight difficulties in the application of the instrument, which it has been the purpose of the inventor to overcome. Thus it was found, that in applying exhaustion over the whole extremity, the limb was gradually drawn into the machine; this is remedied by shortening the cylinder, and before commencing exhaustion, placing the sole in contact with its end. For the upper extremity of the cylinder is bent so as to enable the elbow to rest against its side. The alterations meet the difficulties mentioned. The exhausting syringe is also very much simplified.



Dr. Junod has published, in one small volume entitled "De l'hémospasie," a collection of papers printed at the time that each matter treated of became the subject of experiment. The author proposes to supersede by means of his apparatus, general bleeding, medicines exerting a depressing effect upon the system, local stimulants, leeches, &c.

Of the enormous influence which this principle can be made to exert over the system, the following note, extracted from page 14, will give some idea:—

"It is impossible to calculate the effects indicated, or to appreciate the energy of this mode of treatment, without knowing that at will it is possible to withdraw instantly from the general circulation, from six to ten pounds of blood, and to maintain this enormous displacement as long as the case requires."

For twenty years Dr. Junod has been pursuing these views with the most commendable devotion, and every year has added to the store of his observations. The remarkable facts which he has communicated have induced the Academy of Sciences in Paris to speak so favorably of the invention, that at this moment it is used in most of the hospitals of France as a means of arresting inflammatory action.

Attracted by the desire to make his great system known generally to the medical world, Dr. Junod has placed his apparatus in the Crystal Palace, in the department of Switzerland, where it is open to inspection. As a proof of the estimation in which the system is held in France, there are published at the end of the work nearly fifty testimonials in its favor from the highest medical and surgical authorities.

Besides, however, the apparatus for an exhausting effect, Dr. Junod proposed the converse of this remedial influence, and applied compressed air. For this purpose a large air-tight chamber is used, having the form of a diving-bell. The patient is seated within, and air forced in until the necessary amount of pressure is produced—say of two, three, or more atmospheres.

In the numerous experiments made of this treatment, it would appear that in the proportion that the powers of vitality are diminished in the method by exhaustion, they are increased and rendered more active by that of compressed air. The kind of maladies which have been relieved or cured by the latter process are precisely those in which an atonic condition of the system exists.

We cannot conclude this notice without expressing a hope that some of our English Surgeons will find time and opportunity to pursue the practice suggested and partially carried out by Dr. Junod.

An Instrument for Applying Electric Heat in Dental Operations. By George Waite, M.R.C.S., Surgeon-Dentist.

Hydrocyanic acid, as also the acetate of morphia, and strong acids, have for many years been used in dental-surgery to deaden pain in teeth, but all these applications have been open to many objections.

"A conversation with the late Mr. Murphy of King's College, Cambridge, (says Mr. Waite,) suggested to me the use of electricity in dental-surgery; his words, as near as I can remember, were as follows—'The day will come when electric heat will be used in surgery, and also for many purposes in domestic arrangements.'

"The idea remained a secret with me till last year, when I communicated it to Mr. Redwood, and also to some other scientific friends, and they all appeared pleased with its simplicity and novelty.

"Early in the autumn, Mr. Laxton of Fludyer-street, entered a caveat for me at the patent office, to prevent other parties patenting the invention, although I had no idea of doing so. Considering then my plan no longer a secret, I communicated it to many friends, who expressed themselves so much pleased with it, that having obtained space at the Exposition, I forwarded a drawing of it to the illustrated catalogue of the Great Exhibition. But not to intrude too much on your valuable space, I will state that for the purpose I use a Grove's battery with eight cells. When using it I have in my hand a holder with two copper wires passing through it, one positive from the battery, and the other terminating in a groove in the holder and fastened to a spring, by which I make or break contact at will with the negative wire. To the further end of the two wires a thin platinum wire is connected, and on the battery being charged and contact made, this takes suddenly the electric heat.

"The efficacy and simplicity of the process being so decided, I am enabled to use it for many purposes, viz., to evaporate quicksilver from cements, and render them much less injurious to teeth than they otherwise would be; also where too great sensitiveness exists, and which prevents the operator from removing the caries; where gums have receded and left the necks of teeth highly sensitive to the touch; where teeth are affected by mollities which cannot by other means be combated; where teeth have to be pivoted, and when vitality remaining in the root would subject the patient to serious inflammation; where teeth

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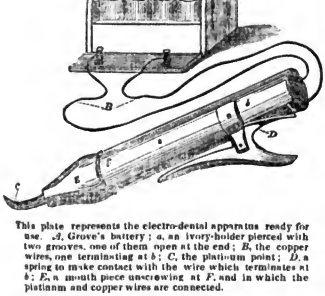
have been broken, or cut, or filed, and left sensitive to cold and warmth; where violent toothache exists; where hæmorrhages come on, or slight bleeding into the cavity, preventing a continuance of any operation.

"The electric heat retains its force differently to all other heat which can be applied to the mouth; the platinum wire can be placed, without the patient being aware of it, near the part affected, heat can be produced almost momentarily, and suddenly deadened, and as a most interesting phenomenon, and one which has surprised me very much, in patients of a highly nervous temperament where I have expected much suffering, none has been endured on its application. It would be superfluous here to detail many interesting facts which the use of electric heat will discover to the scientific dentist; these philosophy explains with the laws of the sensitive faculty. It is my sincere hope that operators will be judicious in the use of this agent, and not bring it into disrepute by ill-judged and ill-timed applications.

"In many cases it will be found equally efficacious when holding it near the teeth, as if they were touched by it.

"Care must be taken not to continue its application too long, as it will burn up and blacken the part it touches.

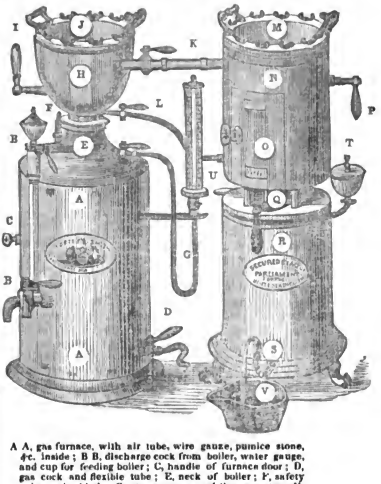
"As time passes on, I look forward to its use being generally understood, and it will then give rise to many improvements tending to the benefit of society."



This plate represents the electro-dental apparatus ready for use. *A*, Grove's battery; *a*, an ivory-holder pierced with two grooves, one of them open at the end; *B*, the copper wires, one terminating at *b*; *C*, the platinum point; *D*, a spring to make contact with the wire which terminates at *b*; *E*, a mouth piece unscrewing at *F*, and in which the platinum and copper wires are connected.

Patent Esculapian Still and Condensing Apparatus. COFFEY & SMITH, Providence-row, Finsbury-square.

Mode of Operation.—Steam being generated in boiler by gas or other fuel, ascends through neck (E) into head (H), containing jacket inside, so constructed that by turning handle (I) you admit or shut off steam from an orifice, in direct contact with any vessel placed therein; a movable pan (J), block-tin still retort, &c., can be operated upon with precision and almost unparalleled superiority, as you can regulate your temperature by increasing or decreasing jet of steam, (upon retort, &c.) To the right (of H) near the top is a main steam pipe (K), which conducts steam to a circular chamber, the top being precisely the same as H I J (opposite), two-thirds of bottom being devoted to steam drying closet (N O) with cock below (Q), which admits spent steam into condenser, contained in circular vessel underneath (R), which is



A A, gas furnace, with air tube, wire gauze, pumice stone, &c. inside; B B, discharge cock from boiler, water gauge, and cup for feeding boiler; C, handle of furnace door; D, gas cock and flexible tube; E, neck of boiler; F, safety valve and whistle; G, steam gauge and thermometer; H, cup shaped head and jacket; I, regulating lever connected to valve in jacket; J, movable pan; K, main steam pipe; L, condensed steam pipe; M, movable pan over drying closet; N O, drying closet, door, and ventilator; P, regulating lever, same as I; Q, spent steam cock connected to condenser; R, vessel containing cold water and condenser; S, outlet for distilled water; T, funnel and cover for filling condensing tub; U, outlet for waste water from condensing tub; V, distilled water.

filled with cold water by (T), and ultimately comes out (through S) as condensed steam, or distilled water. If required, one or two more worms can be added to connect to block tin still, &c., &c.

By means of this apparatus, the operator can perform half-a-dozen different processes in a few square feet, and it can be put into action, or stopped instanter at any stage of the proceedings. It not only acts as a stove, but contains a still condenser, two, three, or four evaporating and decocting pans, steam bath, (for retort), drying closet, &c. The heat can also be regulated, with the greatest ease and safety, from 150° to 250°, or 300° Fah., if necessary. The apparatus, except when of very large size, is readily portable.

The advantage of an apparatus by which many different processes can be conducted at once will be readily apparent to all who are engaged in pharmaceutical operations. We are acquainted with those who are so engaged, and who have used the Esculapian still, of which they have expressed their approval. It has indeed been set forth as one of the especial recommendations of this invention, that it does not demand continuous personal attention. In a qualified sense, this may be the case, but like other fire and water machinery, it must not be left wholly to itself. On the whole, we feel warranted in recommending Messrs. Coffey and Smith's apparatus to all whom it may concern.

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Foreign Department.

A New Therapeutical Agent.

M. Pravaz, director of the orthopædic and *pneumatic* institution of Lyons, has just published a book wherein he advocates the use of compressed air in the treatment of various diseases. He gives compressed air baths in a sort of iron box of about twenty-seven cubic feet, which is so managed as to allow the renovating and condensing of the air, by means of a pump set in motion by steam power. Here the patients are placed for a length of time, regulated by the nature of the affection; and the author quotes several cases of phthisis, Pott's disease of the spine, and even deafness, where much benefit was derived. The rationale of this treatment is thus given by M. Pravaz:—"1. Atmospheric pressure exercises a mechanical influence on the development of the lungs, and therefore on the expansion of the chest. When the air is condensed to a certain degree inspiration acquires greater power. 2. The chemical phenomena of respiration are modified by the greater or less density of the atmosphere, and the endosmose of oxygen increases with the compression of the air. 3. Atmospheric pressure is one of the agents of the venous circulation; from which fact it may be concluded that an increased density of the air must favour the return of the blood towards the right side of the heart, whilst, on the contrary, the rarefied state of the air tends to produce congestion in the capillary system. 4. The physiological phenomena observed on the top of high mountains, and in the diving bell, agree perfectly with the foregoing propositions. Thus it is well known that respiration in the rarefied air of elevated spots becomes short and panting; muscular action difficult, and the arterial circulation more rapid; whilst the flow of the venous blood gets languid. The latter circumstance causes various kinds of hæmorrhage, and the stasis of the blood in the portal system, which stasis becomes manifest by colicky pains, nausea, and vomiting. In the rarefied air of the diving bell, respiration is, on the contrary, much easier, and of greater scope, muscular action more powerful, the functions of nutrition and elimination more actively performed, and the cardiac rhythm slower and even stationary." If our space would allow of a little discussion, some glaring fallacies might easily be pointed out which militate considerably with the author's deductions, but we need hardly enter into this controversy. It can, however, not be denied, that M. Pravaz is a zealous, sensible, and ingenious man. —*From a Review by Dr. Aran, in L'Union Médicale.*

A Peculiar Lesion of the Lungs connected with Congenital Syphilis.

M. Depaul lately brought before the Academy of Medicine of Paris, a subject of great interest—viz., hereditary or congenital syphilis; and called attention to a special lesion of the lungs resulting from the syphilitic taint, which, according to the author, has not as yet been described. M. Depaul's paper contains comprehensive views of hereditary syphilis; we must, however, confine ourselves to the transcription of the conclusions drawn by the author. Before enumerating these, we should not omit to mention the following assertion of M. Depaul's:—"The mother being healthy, and the disease being transmitted by the father at the time of fecundation, it is possible that the embryo contaminate the mother during its intra-uterine life." *Conclusions.*—1. Syphilis is a much more common disease of the fœtus in utero than is generally supposed. 2. The disease may be transmitted by the mother or the father, or by both at the same time. 3. The laws of propagation of extra-uterine life are very different from what takes place in utero. In the first case we have a series of phenomena following each other in an almost constant order; whereas, in the second case, nothing can be foretold, for here there is a general infection, which produces at once a similar constitutional taint. 4. To the several manifestations of a syphilitic kind appearing both at and not long after birth, we should add a peculiar alteration of the lungs. 5. This alteration is rather frequent, and of a much more severe nature than the other phenomena. 6. The latter offer some chance of cure, but the lesion of the lungs is almost always followed by death. 7. Hence the importance of combating syphilis in the parents before fecundation, or of attenuating its effects during gestation, by giving mercury to the mother. 8. This treatment will be fully authorized if this pulmonary lesion be found upon a child who died soon after birth, when the mother becomes pregnant again, even were the proofs of the father or mother being contaminated completely wanting.

Complicated Labour occasioned by a Fibrous Tumour lodged in the Substance of the Posterior Lip of the Uterus.

This case was related by Dr. Danyau before the Academy of Medicine of Paris. Labour had begun two days before M. Danyau was called in, and when he proceeded to examine the patient, he felt, in the posterior portion of the neck of the uterus, a voluminous tumour which had developed in the substance of the organ. A narrow space was left between the tumour and the anterior part of the cervix, and the finger being introduced therein came in contact with a foot of the fœtus. As the latter was alive, M. Danyau made an incision into the neck of the womb, on its posterior half; the wound was forcibly kept open, and the tumour enucleated. The latter weighed about sixteen ounces, and was three inches long; the fœtus was then brought down by the feet, and both the mother and child have done well.

M. Leroy d'Etiolles *and the Academy of Medicine of Paris.*

M. Velpeau lately presented to the Academy an ingenious instrument made by M. Luër, wherewith foreign bodies, as fragments of catheter &c., may be extracted from the bladder. M. Leroy d'Etiolles, well known as the inventor of a host of instruments of more or less merit, thereupon writes to *L'Union Médicale*, and brings to light a fact very characteristic of the changes which will now and then come over learned bodies. Ten years ago he had sent an instrument of an analogous description to the same Academy, when the reporter stated that the apparatus was of no interest to the Academy, and might be sent back to its inventor.

Enormous Corpulence.

Dr. Aran lately published in *L'Union Médicale* the case of a woman of twenty-five, under the care of M. Rostan, at the Hôtel Dieu, in Paris, who died one month after admission, evidently from a surprising accumulation of fat. Bronchitis and dyspnœa were the prominent symptoms. She could not have weighed less than 400 pounds, every portion of her body being disfigured by deposition of adipose matter. On a post-mortem examination, fat was found both in the chest and abdomen; even in the mediastina and between the pleura and the walls of the chest. The viscera of the abdomen were literally lost in the fat, but no organ had undergone fatty degeneration. The patient could not account for the polysarcia with which she was affected, and she had lived very moderately.

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Dr. Aran has taken this opportunity of largely referring to Dr. Chambers' "Lectures on Corpulency."

Calculi extracted from the Perinæum.

M. Maisonneuve lately related the case of a man, now thirty-six years of age, who was operated upon for stone at four years of age. He remained well for thirty years, after which pain occurred in the perinæum, and the part being examined, a hard body was felt, which on being extracted was found to be a calculus. Four years afterwards the patient applied again with the same symptoms, and another stone was extracted through the perinæum. No urine escaped through the wound.

Ovarian Hernia.

At one of the late meetings of the Surgical Society of Paris, M. Guersant, chief surgeon to the Hospital for Children, brought forward, with a praiseworthy and manly love of truth, a case in which an error in diagnosis was committed, and which ended fatally. The patient was a little girl, eleven years of age, who, ever since she was one year old, had had in the left labium a small, painless tumour. Of late, however, this tumour had become troublesome, and interfered with walking. When examined, it was found of the size of a small walnut, situated in the thickness of the labium, and extremely movable, so much so, that it could be pushed downwards to the most posterior portion of the labium, and upwards as far as the external ring. It was, however, impossible to press the tumour into the ring, which latter presented no abnormal dilatation. The tumour had a great deal of analogy with a testicle. M. Guersant looked upon it as a cyst, and resolved to remove it. A longitudinal incision brought into view a membrane much resembling the tunica vaginalis, and having the aspect of the peritonæum. Through this membrane an ovoid body was observed, which was no other than the ovary; it was attached to a pedicle formed by the Fallopian tube, which ran into the abdomen through the inguinal canal. M. Guersant placed a ligature on the pedicle, and cut out the ovary. Acute peritonitis occurred the very next day, and the patient died on the third day after the operation. M. Morel mentioned during the discussion that he had had an opportunity of seeing a tumour of the same kind in the labium, and formed by the ovary; no modification of size or sensibility was noticed to occur at the menstrual period. M. Lenoir stated that Pott has related a case in which two ovaries were removed by an error in circumstances analogous to those of M. Guersant's patient.

Considerable Hypertrophy of the Mammæ.

The following case lately came before the Academy of Medicine of Paris:—S. B. of a good constitution, began to menstruate at eighteen; four months afterwards the catamenia disappeared almost completely, without any known cause. The mammæ, which hitherto had been small, became painful, and grew so large that, at the end of one year, the left breast measured fifteen inches from the base to the nipple, twenty-seven in circumference in the centre, and twenty-two around the root. The size was almost the same on the right side. Large veins ramified on the surface, and indurated nodules pervaded the substance. In 1844, three years after the beginning of the affection, M. Rouyer saw the patient: at this time the abdomen was completely covered by these gigantic tumours, which hung down as far as the knees; the presumed weight of each being about thirty pounds. The patient had thereby been confined to bed for the last two years.

Removal being deemed advisable, the left breast was removed, with every precaution as to the loss of blood; the patient, nevertheless, had hæmorrhage to the extent of forty ounces. Twenty-six days after this operation, the right breast, which had in the meanwhile considerably diminished, was likewise amputated. The left mammæ weighed thirty pounds and a half, the right twenty and a half; and both were composed of fat and degenerated portions of the gland. The total weight of the patient had been lessened by one-third. M. Robert, who reported on the case, stated that he considered the affection as non-malignant; and that the fact of the remaining breast diminishing in size after the removal of the first, would in a similar case make him wait for a few months between the two operations, with the hope that the unremoved breast might become atrophied.

Treatment of Skin Diseases, Small-pox, Syphilis, and Ague, in Morocco.

We extract from an interesting paper of Dr. Dulac, a French surgeon employed in the embassy to Morocco, the following particulars. The most frequent diseases in Morocco are tænia, the itch, small-pox, syphilis, and ague. The *favus vulgaris* is much more common than the *scutiformis*, and the *theubibs* (for doctors) employ the following remedy against it:—A water tortoise is thrown into a large fire, and is there left until it is completely carbonized; it is then taken out and pounded in a mortar. The powder, mixed with oil, is every evening smeared on the patient's head, who washes off the ointment in the morning with sea-water. A great many cures are said to be thus obtained. Almost all the Arabs use for the itch an application of sulphur and butter, with which they rub the whole body; in the mountains, however, they prefer a purgative composed of pitch and very rancid butter. In obstinate cases they use an ointment composed of one drachm of arsenious acid to two ounces of butter. Three day's frictions all over the body are said to be sufficient for a cure. Small-pox destroys a frightful number of people, especially in the spring, and as much as one-fourth, or even one-third of the inhabitants of certain localities are carried off. The Moroccese obstinately refuse to be vaccinated, and say that the law of the Prophet is against the practice. The Jews are less averse to vaccination, and Dr. Dulac succeeded in vaccinating several children belonging to Jewish parents, but not one Mussulman child was ever brought to him. The *theubibs* say that small-pox lasts just nine days, and they divide these into three periods. They state that the pustules form during the three first days, that they fill for the three next, that they empty themselves and dry up for the three last, and that the patient is out of danger on the tenth day. He is prevented from taking any fish, or herbs, and is given weak tea and chicken broth: the variations of temperature are avoided, and lemons or vinegar are carefully excluded from the patient's room. Castor-oil, or very rancid butter, is afterwards used as a purgative; the latter being sometimes mixed with a little tar.

Syphilitic affections are very common in Morocco; syphilis is called *merd ël kebir* (the big disease.) Dr. Dulac saw principally secondary and tertiary affections, which chiefly occupied the anal region. The *theubibs* treat syphilis either with or without mercury. When the metal is not used, the *Haskba* (sarsaparilla) is given, of which the patient is made to *eat* one ounce per diem. He is desired to swallow the whole root, as the doctors do not believe that water can take up its medical properties. The patient avoids tea and coffee,

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and takes only bread and dried fruit. He continues this for forty days, is then smartly purged, and allowed to resume his usual mode of life. When this treatment does not succeed, and ulceration of the penis or a discharge from the urethra persists, mercury, extinguished in honey, is given. No other mercurial preparation is known. Five grains are given once a week, and a strong dose of castor-oil is administered soon afterwards.

Ague is very common, and though the *thenbibs* know the properties of bark, they and the patients avoid its use, owing to its high price; they substitute for it ground coffee mixed with lemon-juice, and likewise various kinds of bitters. A very celebrated *marabout* in the neighbourhood of the city of Morocco, possesses an infallible specific for ague, but it requires more than common courage to take it. It consists of a slice of bread and butter on which is placed a layer of *pediculi capitis*. Dr. Dulac mentions that this remedy was *proposed* to the wife of a European consul at Tangiers, who could not get rid of her ague, but he does not say whether she *took* it. Dr. Dulac spoke, on the other hand, to several Arabs who had done so, and who spoke very highly of the efficacy of a specific so cheap and so easily procured. When a *thenbib* has exhausted all his remedies without any beneficial results, he resorts to religious practices; he, for instance, writes a few verses of the Koran on a slip of paper, burns it, and makes the patient swallow the residue. Or he writes on a dinner plate what he had put on the paper, washes off the writing from the plate, and desires the sick man to drink the water used for the purpose. Or he lastly, proceeds like the *mesmerisers* of this country, makes several passes over the head of the patient, and mutters some prayers. As a *dernier ressort* the patient undertakes a pilgrimage to some holy and celebrated *marabout*, where he offers up in sacrifice, either a bull, a sheep, a goat, or only a hen, according to his means.

FALLACIES RESPECTING CLIMATE.

Popular fallacies which have once taken possession of the public mind are always difficult to eradicate, even after they have been proved erroneous. Amongst various notions of the above description still entertained by some of our countrymen, may be ranked the ideal superiority, in their estimation, of many climates over that of England. In support of this opinion, reference need only be made to numerous books and *brochures* written expressly "ad captandum vulgus;" but which, on examination, are often found to be nothing more than puffing advertisements of particular places thus brought under the notice of anxiously desired prospective customers. The same remarks frequently apply, with equal justice, to similar publications regarding particular localities of Great Britain; which warrant critics in saying, wherever an individual praises the climate, superior advantages, or salubrity of any district where he has property, or resides and practices, then grave doubts are engendered of the writer's impartiality. According to an old saying, no tradesman ever depreciates his own goods; consequently, it is not likely an author will disparage the place with whose interest fate has connected him; on the contrary, whilst endeavouring to explain any inherent objection it possesses, he will naturally feel disposed to laud every superiority, whether real or imaginary.

We make these cursory remarks, as the season approaches when many Englishmen begin to feel restive in regard to changing their residence, or even to go abroad on the plea that such a step is necessary for the improvement of health. Although it is acknowledged the air of the country is frequently more salubrious than that of towns, in many instances the reverse obtains; seeing that large cities often seem in a higher degree beneficial to the health of residents, than less populous localities. Speaking generally, the sea-coast, unless for particular constitutions, appears not so invigorating and healthy as inland mountainous districts; especially those which have, in the latter case, a westerly exposure, being at the same time protected from the east and north winds. The truth of these assertions may be easily ascertained by inquiry respecting the greater longevity of persons residing in elevated localities, compared with inhabitants living on the banks of rivers or sea-shore. Take for example Birmingham in the centre of England. Notwithstanding its smoke, multitudinous and often not very healthy trades, with a numerous yet laborious population, this town is the most salubrious place similarly circumstanced throughout the country. It never suffered from cholera, is seldom attacked by typhus, and altogether the rate of mortality is lower than any other populously inhabited district in the kingdom. Contradistinguished to this peculiarity, various towns on the sea-coast should be compared, to mark the decided difference; such as Hull, Liverpool, Glasgow, Southampton, and Dover; nay, even the far-famed Brighton, to which many invalids and fashionable metropolitans resort at particular seasons. All these places are far inferior as residences, in regard to salubrity, to inland situations, or even to the great metropolis, with its enormous population, and the many prevalent influences inimical to health, which arise from artificial causes, besides those produced by dissipation and the habits peculiar to every large capital.

However, our object in these remarks being to correct fallacious opinions frequently promulgated respecting the salubrity of continental towns in comparison with places in England, but to which, from preconceived yet mistaken notions, parties often resort in the hope of improving their shattered constitutions, we propose, by way of illustration, to contrast the rate of mortality recorded in some of the most favoured localities, with that of London, wholly irrespective of many salubrious districts of England, otherwise peculiarly adapted for invalids. Thus in Paris, where so many English persons used, and are still anxious to sojourn, under the idea that their health would be benefitted, one death for every thirty-one inhabitants is annually reported. In Rome, which is a favourite residence for parties in weak health, and therefore often recommended by British physicians, the mortality is so high, that one inhabitant in every twenty-five dies annually; whilst in

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summer, the eternal city becomes so unhealthy, that all residents who can, fly away, as if from a pestilence. Again, Naples, considered by many as an earthly paradise, from possessing a splendid sky, beautiful scenery around, with nature smiling in the greatest luxuriance, is almost equally unhealthy. This overlauded region, although called by natives "*Il paese felice*," and likewise often considered the "land of promise," to which northern nations, whether Huns, Gauls, or more modern civilized people, frequently directed their footsteps, in order to obtain possession of a country always much coveted,—ultimately proved the grave of mental energy, and also of the physical strength of invaders.

Lest these remarks may seem mere assertions, some proof becomes necessary to substantiate their correctness and applicability. This is readily supplied by tables, recently published, illustrating the population of Naples in 1850, and the amount of mortality recorded, during the year, in that capital. If contrasted with similar documents, prepared by the Registrar-General of England, important and conclusive comparisons can be easily made, which must settle any point at issue, and show whether London or Naples is the most salubrious residence. In the latter city, although 1850 was by no means an unhealthy season, one person died in every twenty-seven and three-fourth inhabitants; whereas, in London, the gross mortality was only one death in every forty-six and a half residents, being a little more than half the rate reported in the far-famed metropolis of southern Italy. Hence, had 475 natives of England then resided in Naples, seventeen would probably have died within the year; whilst, out of the same number in London, the amount of deaths, *ceteris paribus*, averaged ten at the utmost.

These are not vague conclusions, but strictly deduced from well authenticated premises, which every person conversant with the probabilities of human life can easily understand and calculate. No one could foretell the individuals who might become examples, but such would be the general average.

In reference, however, to the two sexes, it is curious, that, both in Naples and London, females died in smaller proportion than males, seeing, in the former metropolis, during 1850, one woman was carried of in every thirty and a half residents of the same sex; whilst, amongst men, the ratio was one death in every twenty-five then living. On the other hand, in London, although one male died in every forty-three persons of the same sex, amongst women, the number ranged so low as one death to every forty-nine and a quarter females, at the time resident.

These comparative results appear exceedingly interesting, and are now mentioned to prove that London, notwithstanding some drawbacks—the carelessness of local authorities in not removing various *fomites* of disease, still existing in different neighbourhoods, or the insalubrious occupations and dissipated habits of a portion of its enormous population—need not fear any comparison with other large towns "where men do congregate," but quite the reverse. However, the subjects here mooted are so important, and as much new matter might be brought forward to elucidate particular points, we must defer further discussion to a future and more convenient opportunity.

THE FOLLY AND KNAVERY OF HOMŒOPATHY.

In a series of articles we have endeavoured to expose the folly and knavery of homœopathy, and to make evident the sordid motives of its professors. We turn now to show the painful effects of this fraud on society, and its deleterious influence on the morals, as well as the interests of the medical profession. When these absurdities were in their infancy, it was safe, and perhaps wise to treat them with derision and contempt. But when, through falsehood and chicanery, they have attained a dangerous elevation, and when it is clear they exercise a fatal influence upon public health, it becomes necessary to follow them through their tortuous proceedings to their last calamitous issues in tragedy and death. In doing this we shall, as far as possible, teach by example; as STERNE, when he would give an idea of the misfortune of captivity, sketched a single prisoner, whose portrait he drew, so we find no better method than the record of individual cases. Unfortunately we are seldom permitted to publish names as the vouchers of medical histories. The circumstances of these deep tragedies are too horribly painful for patient reflection on the part of those who have participated in them. It would be too cruel to gibbet them by an exposure to public indignation. We are, however, as professional men, debarred from any public use of the names given us, by the very manner in which they are conveyed. But should any of the practisers or encouragers of these iniquities, recognise their own portraits in our pages, we shall not regret it, especially if it induce them to retire from a scandalous occupation, and atone for part crimes in humiliation and penitence. Abuse of trust, even a pecuniary one, is held not to be a crime in law. But surely, in the eye of reason and equity, and by men of honour, it must be held to be the greatest of all delinquencies. Of such faults, none is more debasing than the abuse of medical confidence—none owns a meaner motive—none is attended by consequences more immediate or so appalling—none, therefore unmasks a harder heart or a fouler conscience.

This journal gives striking illustrations of the truth of this. A poor man is seized with strangulated hernia. His anxious friends rush to the doctor, who is a homœopathist. Like most of his tribe, he has neither eyes, nor ears, nor thoughts, nor time, for any but the well-paying maladies of the rich. This poor man is globulized; the fears of friends are calmed by intrepid assurances of his speedy restoration to health; his agonies increase; other and more competent advisers are sought; an operation is too late, though skilfully performed, and the patient sinks and dies amidst the terrors and affliction of his family. He lived

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in a civilized land, with all the appliances and means of surgical skill ready at hand; but a pitiful quack dared to stand between him and safety. At the inquest on his body, the homœopathic doctor evinced not a feeling of regret. Full of self-approbation and impudence, he excused every part of his conduct. Mrs. MANNING, who would have shot a man as she would a cat on a wall, was not more indifferent to her crime than he was to the consequences of his treatment, or rather, no-treatment. These men must have hearts harder than the nether millstone, and consciences seared with guilt, to be able to persevere in a life of such infamy and horror.

We have been made aware of the circumstances which occurred in the person of the coachman of Lord A——. He attended his employer at one of her Majesty's drawing-rooms on a very hot day in summer, and, while waiting, drank rather freely. He, next day, complained of headache, and was persuaded by the family to place himself under the care of a favourite homœopathist. He was willing enough, as it implied only the swallowing of a globule. The headache increased, and the treatment was continued until the man became delirious. In this case, we regret to say that a medical man sanctioned the proceedings. At length an eminent physician was sent for, but too late, as it proved, to save the unlucky patient, who died, leaving a large family in indigence and suffering.

Some months ago a physician of our acquaintance was sent for, to visit a dying woman. He was addressed by the patient in these sad and solemn words, for the truth of which we can vouch:—"Ah, doctor, I am afraid you come too late to do me any good. I have been a sad fool. I know it now." It was indeed too late. She died in a few hours. The trembling homœopath had fled with affected indignation when he learned that a respectable practitioner had been called to the case, but he did not fail, like the ordinary knaves of his calling, to proclaim that the event would have been different had the patient continued to trust in him and his infinitesimals. Yet notwithstanding the existence of such horrors, not in one case, but in dozens, we have before us, at this moment, the account of the wife of a wealthy baronet, who is about to leave town for the season, furnished with an ample supply of globules. This woman, besides consulting more than one homœopathist, has, we regret to say, for her medical attendant, a physician who occupies a most respected station in his profession. He listens to her babble, not only without reproof, but with indulgence amounting to encouragement, and thus she goes into the country to spread mischief around her. Armed with such dictatorial power, her neighbours scarcely venture to oppose her, and a great portion of the clergy, ready to eat humble-pie at her table, do her bidding, and propagate her poisonous advice, while few of the medical practitioners in her neighbourhood, though all are deeply injured by her folly, dare assail it. But we tell our country friends, and particularly her family surgeon, that if they would relieve themselves from oppression, and check an injurious encroachment, they must learn to speak out. We have done our duty, and shall continue to do so. But our hands would be much strengthened were the strong will of the profession heard in that deep earnest voice of conviction which awakens sleepers, detects offenders, and rallies scattered friends. The dull and ridiculous spirit of resistance rife in our inert and foolish colleges, will and must give way before general indignation. Censors and Examiners, Elects, and Councillors, and Fellows, will show the requisite alacrity to meet the desires of their profession, when these are emphatically and unmistakably pronounced. We shall then no longer be affronted by the spectacle of quacks appointed to be public orators, and insulted at every corner of the street, and in every newspaper, by the open exhibition of the degraded offices of the profession. Chevalier BUNSON, the patron and dupe of every variety of quackery, will not again adjourn himself from the meetings of the Homœopathic Hospital to the meetings of the College of Physicians, nor be invited by President and Fellows to meet our declared enemies, and the enemies of the medical profession. These things achieved, it will be difficult for a conceited and fashionable physician to whisper away the interests and honour of the profession in the ears of a few vain and silly titled women.

WHAT SHALL BE DONE WITH THE CRYSTAL PALACE?

WHAT shall be done with the Crystal Palace? is a question now asked in every quarter, and by all ranks of society. The reply, that no Goth, Vandalic, or sacrilegious hands, will ever be permitted to pull down so fairy-like and beautiful a structure, is almost unanimous. Such being the state of public feeling, it appears wholly superfluous to adduce any arguments on the subject; the only point now remaining at issue being, how to appropriate the building most advantageously? This we propose discussing on the present occasion; and as any inquiry of that kind involves important hygienic principles, interesting to the entire community, their investigation consequently comes within the legitimate province of a medical journal.

Considering the variable character of our climate, especially during winter and spring, and the advantages of possessing a locality of sufficient extent, where all may be able to breathe an atmosphere untainted by smoke, and of equable temperature, whatever may be the prevalent weather, besides having a place in which the eye is gratified by the sight of plants and flowers at all seasons; whilst the mind may be at the same time improved by contemplating the products of nature, interesting works of art, and the great results of human ingenuity, the proposition of converting the palace of glass into a perpetual garden and museum, containing the productions of various climes, is decidedly the most feasible; and if carried out judiciously would prove highly advantage-

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ous. To invalids, and especially to the rising generation, who will soon become the artisans, professional men, and future legislators of England, an establishment of the kind proposed would be truly invaluable, seeing that all might then take exercise and be instructed by surrounding objects, without exposure to the vicissitudes of season, whilst protected from harm—so liable to happen in crowded metropolitan thoroughfares. In addition to these advantages, the contemplation of nature in all its beauty, embellished by art and science, which a properly arranged garden or museum always produces upon the minds of visitors, would likewise have a beneficial influence upon the feelings and intellectual faculties, not only of those who came for study or mental recreation, but also on persons attracted thither for the sole purpose of physical enjoyment. But although it seems by no means desirable to convert the proposed garden into a mere receptacle for invalids, or to make it like a large nursery for the juvenile population of London, no individual will deny, were it even used chiefly for such purposes, that the plan would still constitute a great boon to every member of the commonwealth. To the former class, such as dyspeptic, hypochondriac, and nervous persons of both sexes, who are often afraid to go out of doors, particularly in doubtful weather, lest they should catch cold, or suffer injury to health, a promenade of the kind proposed would often prove highly sanative; whilst to young people an hour or two spent in bodily movement, when breathing pure air, and admiring surrounding objects, could not be otherwise than invigorating to their physical frames and mental faculties.

It is unnecessary to enter at greater length, either into the general benefits such a winter garden would indubitably produce, or into the details which appear necessary to carry out that project. Nevertheless, advocating the principle of making the establishment entirely self-supporting, the price of admission should be so moderate as to render it accessible to the million, with perhaps one or two days for exclusives; whereby its usefulness would be much more extended, and the pleasure derived at the same time diffused to the widest possible range. Another suggestion of moment, which has been made by some parties, deserves more than a passing notice—viz., the proposal of admitting equestrians within its precincts. To any proposition of that kind there are most serious objections. Indeed, in our estimation, the garden ought to be exclusively restricted to pedestrians, and those using wheeled chairs, who, being invalids, cannot otherwise enjoy locomotion. No animals whatever should be allowed to enter, since they contaminate the atmosphere, and would besides prove a great nuisance to the general company. To change the Glass Palace into an immense riding-school, or make it only another Rotten-row under cover, would be a most disagreeable annoyance; and to permit parties, whom a facetious alderman calls "fast women in wide-awakes" to canter about, to be ogled at by ancient and juvenile beaux, whether cavaliers or on foot, is wholly inadmissible. Against such a proceeding we enter our protest, and hope it will never be entertained. Equestrians of all degrees at present possess ample space for manœuvring in the Park rides or Kensington-gardens, where they have already become sufficiently formidable to nursery-maids and old ladies. To these fashionable regions they ought to confine their future feats. The presence of riders in the Crystal Palace would disturb the pedestrians, besides being a desecration.

Reviews and Notices of Books.

Notices of the Meetings of Members of the Royal Institution of Great Britain. Part I., from January to June, 1851. pp. 98.

At this celebrated establishment, where Davy first made known his great discoveries, and Brande and Faraday have since laboured assiduously in the promotion of science, besides other improvements recently adopted by the managing authorities to carry out its important objects, an official record of the various interesting lectures delivered on the Friday evening meetings, during the past season, has just been printed. Although prepared for the use of members, but not published, copies have been distributed to the scientific societies of London, as also to literary and professional journals. When the names of some of the distinguished persons mentioned in this brochure to have lectured, with the subjects discussed, are known, further proof appears unnecessary to show its value and importance. For instance, the Astronomer Royal occupied an evening by lecturing "On the Total Solar Eclipse of 1851." Sir Charles Lyell, at a subsequent meeting, "On Impressions of Rain Drops in Ancient and Modern Strata;" Sir Roderick Murchison, "On the Former Changes of the Alps;" Professor Baden Powell, "On the Rotation of the Earth;" Colonel Rawlinson, "On Babylon and Nineveh;" besides Professor Brande "On Peat and its Products." Various other eminent men, likewise, contributed on different occasions important information, which seemed to gratify and instruct the large audiences often assembled.

This short critique would, however, be imperfect, where the name of Faraday omitted. Indeed, such an oversight would be worse than leaving out the part of Hamlet, when that play was performed; seeing that this truly great philosopher *electrified* most crowded assemblages with the knowledge he imparted on more than one occasion. When it is stated in the table of "contents" that Professor Faraday lectured "On the Magnetic Characters and Relations of Oxygen and Hydrogen," "On Atmospheric Magnetism," "On Electric Currents in Plants," "On Artificial Production of the Ruby," and "On Schönbein's Ozone," enough has been mentioned to prove that his discourses must have been of no ordinary description; whilst all who had the good fortune to hear them delivered

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in the lecturer's simple, persuasive, and often eloquent language, were not only instructed, but delighted.

In taking leave of these "Notices" issued by the managers of the Royal Institution, it will be gratifying to our readers, and to all well-constituted minds, to learn, that in concluding his recent course of lectures on "Electrical Philosophy," Mr. Faraday took occasion to speak, in very decided terms, against mesmerism, clairvoyance, and the other absurd assertions of would-be, but, in reality, only pseudo learned pundits. Coming from such an authority as Mr. Faraday—unquestionably better able to speak on similar subjects than any other person in Europe—the dissent he then pronounced to the doctrines believed by credulous individuals, on the data of Elliotson, Ashburner, Gregory, *et "hoc genus omne,"* was conclusive. Indeed, some silly men and nervous girls would have greatly benefitted, had they been present to hear this opinion, which is so important a fact that it ought not to be passed over in silence; on the contrary, it should be promulgated throughout the entire universe.

The New London Pharmacopœia. Translated and Arranged in a Tabular Form with the Edinburgh and Dublin Pharmacopœias; showing at one view the Differences in the Formulæ of the Three Colleges, &c. &c. With Practical Remarks. By PETER SQUIRE, M.R.I., Chemist to the Queen, &c. 8vo, pp. 174. London.

NOTHING could afford a stronger illustration of the necessity for a national faculty of medicine than the work before us. The three Royal Colleges of Physicians of London, Edinburgh, and Dublin, issue three distinct and different Pharmacopœias, some of the preparations of which differ so much in strength as to justify, as Mr. Squire says, "serious apprehensions as to the consequences." Take, for instance, a single extract from the first page of this work:

"Now, acetum opii of Edinburgh is three times the strength of acetum opii of Dublin; the acetum colchici of Dublin is three times the strength of acetum colchici of Edinburgh; and London acetum chantaridis differs in strength in all three, in the relation of 2, 3, and 4. Acidum aceticum of London contains 31 per cent. of real acid, whilst acidum aceticum of Edinburgh contains as much as 85 per cent., nearly three times the strength.

Taking into consideration that the prescription written in London on one day may be prepared in Dublin or Edinburgh the next, it is not difficult to see how serious and even fatal mistakes may occur. Besides these very striking differences, the Dublin College has substituted avoirdupois weight for apothecaries' weight, with what object or for what purpose it would be difficult to determine. Mr. Squire has rendered good service to all who either prescribe or dispense medicine by this work. He has succeeded in bringing together the similar formulæ for ready comparison and reference. The work offers a striking comment on the necessity of uniformity in the strength and preparation of all medicines which are used in the United Kingdom.

The Gold, its Alloys, and other Metals, used by Dentists. By JAMES ROBINSON. Webster & Co., Piccadilly.

THE object the author has had in publishing this pamphlet, has been in defence of the respectable members of the dental art, and the exposure of the frauds and extortions practised by the professed cheap dental-mongers. He gives an analysis of the saliva in health and disease, and shows the chemical action of the acids upon the pure and alloyed metals used by dentists, and the poisonous salts that are formed when inferior alloys are used. To protect the public against the various impositions and substitutions of one metal for another, he suggests as a guarantee, "that every piece of dental-work in gold should bear the name of the dental practitioner; and should any question arise regarding the purity of the material, the patient would only need to send it to the Assay Office for examination, with the results of which he would be furnished in two days, without the least injury or deterioration of the artificial dental apparatus."

Mr. Robinson fully and satisfactory explains the discrepancies that occur in dentists' charges; he says,—

"It is well known that the average price of standard gold is £3 15*s.* per ounce, and any respectable practitioner will use, for a full or partial set, from an ounce to an ounce and three quarters, or even more of this metal, so that the gold itself will on the average cost from £5 to £7: this, it must be remembered, is independently of modelling, teeth, springs, and fittings in the process of manufacture, to say nothing of artistic skill, finish, and adjustment to the mouth, which plays an important part towards the ultimate success, ease, comfort, appearance and durability. Notwithstanding these facts, we have it daily announced by advertisements, handbills, and placards, that whole sets of teeth can be furnished from £3 to £10, each person warranting his wares to be mounted on *pure, superfine, and standard* gold, *with the highest mechanical finish and artistic skill*,—his gold unalloyed, and himself the veritable Simon Pure. There can be only one answer to these impudent assertions with reference to the quality and solidity of the materials employed. The cheap dental conjuror, if he does use pure materials, must have discovered the philosopher's stone, and be a transmuter of the baser metals, or he must have a California in his kitchen, or be a large shareholder in the Cornish Copper Mines, as well as an adept in electro-metallurgy."

The subject has been very fully and ably examined, and we recommend it to the attention of all respectable dental practitioners.

Lectures on the German Mineral Waters, and on their Rational Employment for the Cure of Certain Chronic Diseases. By SIGISMUND SUTRO, M.D. Fcp. 8vo, pp. 432. London: J. W. Parker.

THE main value of Dr. Sutro's volume depends upon its practical character. Hitherto most of the works published on the German spas have been mere handbooks, or descriptive accounts of the various baths which are resorted to by invalids for the cure of chronic diseases. Dr. Sutro has given a description of each spa, and has indicated the cases which are likely to benefited by the different waters. In this respect he has sup-

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plied a deficiency in this class of literature, and his work will be found useful to all interested in the subject of the spas of Germany.

Outlines of Physiology, Anatomy, and Surgery. By WILLIAM WILKINSON. Private Lecturer on Medicine. 16mo. pp. 410. Edinburgh: Maclachlan and Stewart.

CHIEFLY intended as a manual for students preparing for examination, or for refreshing the memories of practitioners engaged in the active duties of their profession. Mr. Wilkinson has succeeded in making his little book less formal and dry than such works usually are, by interspersing anatomical descriptions with surgical and physiological remarks, and by assuming a somewhat familiar style of language.

Surgical Anatomy of the Arteries and Descriptive Anatomy of the Heart. By the late VALENTINE FLOOD, M.D. New Edition, by JOHN HATCH PORTER, M.D. 8vo, pp. 189. Dublin: Fannin and Co.

THE work of Dr. Flood obtained a well-merited popularity. In this edition the editor has fulfilled his task in a praise-worthy manner, and has made many valuable additions to some of the more important subjects treated of in the volume.

Sunning-hill Wells: or a Practical Inquiry into the Action of Iron as a Constituent of the Blood in Health and Disease, in connexion with Chalybeate Springs. By HENRY HOLMES, M.D. Fcap. 8vo. pp. 103. London: Renshaw.

THE late Dr. Baillie wrote a little work on the mineral spring at Sunning-hill, in which he recommended the water in most of those cases in which a mild chalybeate is usually beneficial. It would be difficult to determine why Dr. Holmes has chosen the title which figures in golden letters on the cover of his production, unless it be that he lives in the neighbourhood of the wells, and that it gives him a latitude to talk on a variety of subjects, in which he advances nothing novel, and in a style somewhat bombastic and inflated. The last half-dozen pages of his pamphlet contain all that he can advance respecting the Sunning-hill Wells; the rest is mere common-place general talk. The wells, however, deserve trial by those suffering from a deficiency of iron in the circulation. The neighbourhood in which they are situated is beautiful: they are a moderate distance from the metropolis, and may save invalids the necessity of a long journey.

A Defence of Ignorance. By the Author of "How to Make Home Unhealthy." 8vo, pp. 111. London: Chapman and Hall.

DISPLAYS the same ability as the chapters on "Making Home Unhealthy." The author shows in a forcible manner, but with many pleasant "rubs" and "jocund wipes," the evils which ignorance entails upon the great human family.

The Journal of Psychological Medicine and Mental Pathology. Edited by FORBES WINSLOW, M.D. No. 15, July, 1851. London.

THE chief contents of its present number, which maintains the high character of the journal, are "Modern Scepticism," an able and caustic review of the work of Mr. Atkinson and Miss Martineau, on the "Laws of Man's Nature and Development;" "Modern Metaphysics;" the "Nature and Treatment of Insanity;" "On Idiotic Crania, Idiocy, and Cretinism;" "Remarks on the Morbid Anatomy of the Brain in Insanity," by Mr. Holmes Coote; and "On Instinct and Reason," by Mr. J. Q. Rumball. There is also an interesting and curious article on "The Impulses of the Insane."

On Gout: its History, its Causes, and its Cure. By WILLIAM GAIRDNER, M.D. 8vo, pp. 300. London. 2nd. Edition.

IN this edition Dr. Gairdner has enlarged and exemplified all its practical parts. It is essentially a practical work, and the production of a discerning physician. It comprises the whole subject of gout in all its bearings, and is a necessary addition to the library of every practitioner.

Catalogue of Medical and Scientific Works, with a Classified Index of Subjects, including the names of the Authors who have written upon them. Highley & Son. 8vo, pp. 91.

THIS catalogue contains all the medical works which have been issued by the different publishers for the last twenty-five years, arranged alphabetically, with the dates and prices. It also contains a classified index of the subjects written upon, with the names of the authors, thus affording great facility as a means of reference, to the literary portion of the profession. Messrs. Highley & Son deserve credit for the complete manner in which they have prepared this general catalogue of medical and scientific works.

Physician and Patient; or, a Practical View of the Mutual Duties, Relations, and Interests of the Medical Profession and the Community. By WORTHINGTON HOOKER, M.D. New York: Baker and Scribner. pp. 453.

ALTHOUGH the book whose title heads this review is written, according to the author's own admission, partly for the profession and partly for the community, it has attracted considerable attention, both in America and in England, and deserves notice in THE LANCET. The subjects discussed throughout the nineteen chapters into which the treatise is divided, are so numerous, that our limits prevent any more than a general allusion to the various questions investigated. Amongst these, the most prominent are, Popular Errors; Quackery; Homœopathy; Intercourse of, and Interference with, Physicians; Mutual Influence of Mind and Body in Disease; and lastly, Trials and Pleasures of a Medical Life.

Popular Errors and Quackery, being examined and criticised at considerable length, will repay perusal. But "*humanum est errare;*" hence, if physicians occasionally err in opinion, they often correct their erroneous conclusions by subsequent observation and experience; whereas the ignorant portion of the public only exchange one error for another, when pretending to teach, but in fact

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only to talk about medical questions, whereby they are easily led to believe the erroneous assertions of quacks and impostors. Upon Homœopathy, the author makes well-founded and strong observations, which are conclusive respecting its absurdity. Holding all Hahnemannic notions to be as fallacious as the practice of that heretical sect is futile, it appears mere waste of time to notice the sophistical fancies of homœopathists, further than to advise those who wish to be amused and convinced, to read the sixth chapter of Dr. Hooker's book, in which this German-imported system is fully exposed. Nevertheless, as much floating credulity always prevails in the minds of silly and imaginative persons, whether noble or ignoble, it cannot be astonishing should proselytes continue to promulgate the doctrines of Mesmer, Hahneman, or Preissnitz, all of whom have issued from that prolific modern hot-bed of quackery, "*Deutschland.*" This fact, therefore, makes it more imperative for every true believer in medical science to raise his voice against false theories and imposture, whilst he rests assured that, in the end, "*magna est veritas et prævalebit.*"

The only other topic our limited space permits further notice of, is "the intercourse of physicians" contained in the twelfth chapter; whereof one passage deserves being quoted, as it bears upon a point sometimes overlooked. When speaking of another physician being called in consultation, the author remarks, at page 259—

"He has nothing to do with the past, except so far as it will aid him in discovering the true nature of the case, and in fixing upon the course to be adopted at the present time. He steps out of his province altogether, if he says anything to the friends in regard to what *has* been done. This general rule applies not only to criticisms upon practice, but to all expressions of approbation."

These doctrines are sound, and the quotation seems so important that we have given it verbatim, and would add, however improper to speak disparagingly of other practitioners, to commit such sentiments to writing, which may be used by rivals or enemies for selfish purposes, is yet more unprofessional and reprehensible.

Notwithstanding the intrinsic value of Dr. Hooker's publication, and the varied instructive matter it unquestionably contains, we must remark the style is often by no means pleasing, whilst English critics would say the writing requires amendment. The *U-phobia* peculiar to American authors, for instance, prevails in full force everywhere. This is shown by employing such words as "labor, vigor, parlor, endeavor, neighbor," and so forth. The above mode of spelling may pass current beyond the broad Atlantic: but with due deference for our worthy cousins, it sounds harsh in the ears of Englishmen, and we respectfully express our decided dissent to the practice, lest writers in the old country should adopt such objectionable and erroneous orthography. Admitting some difference of opinion may prevail on this point, between the two nations, there cannot be any respecting the following paragraph, at page 29, which is not only badly expressed but obscure, viz.: "It would sometimes almost seem that a tricksy little spirit were playing its pranks among the organs, now here and now there, eluding his search, escaping his grasp." In spite of these blemishes, before taking leave of the author, we must repeat, his work is a valuable contribution to the profession, and deserves attentive perusal by Europeans.

It may not be out of place, in conclusion, to allude to the work of Dr. Bentley, professing to be a kind of reprint, edited by that gentleman. On comparing the two, we are compelled to declare that Dr. Bentley's book gives by no means a just idea of Dr. Hooker's production. It is garbled and badly put together; and whilst it gives such parts of Hooker as are really below the average, it leaves the more salient points untouched, or, where it touches them, spoils their spirit and intention.

Surgical Anatomy. By JOSEPH MACLISE, Esq. Fasc. IX.

THIS is the concluding part of Mr. Maclise's most beautiful work. We congratulate the author on the termination of his labours on one of the most useful and elegant practical works on anatomy ever published. He dedicates it to the students with whom he was associated in his early career. It certainly will be a valuable assistant to every student in anatomy or surgery, whatever his age, and wherever situated; for it will assist the student in the dissecting-room, and the practitioner, when called upon to operate, will at one glance be able to see his way as clearly as though the human subject were before his eyes.

Pathology of the Human Eye. By JOHN DALRYMPLE, F.R.S. Fasciculus VII.

THIS fasciculus contains the subject of Cataract, treated in a very able manner by the accomplished author. The plates, of which there are four, justly maintain the very high character which this work has hitherto enjoyed.

RECORDS OF THE RESULTS OF

MICROSCOPICAL AND CHEMICAL ANALYSES

OF THE

SOLIDS AND FLUIDS

CONSUMED BY ALL CLASSES OF THE PUBLIC.

TEA,

AND ITS

ADULTERATIONS.

THE tea-plant is a hardy, evergreen, and leafy shrub, which attains the height of from two to six feet, and upwards; it belongs to the natural family Columniferæ, (Ternstromineæ of Lindley,) which includes the Camellias. It is generally propagated from seed, and the plant comes to maturity in from two to three years, yielding, in the course of the season, three, and in some cases, four crops of leaves.

The first gathering takes place very early in the spring, a second in the beginning of May, a third about the middle of June, and a fourth in August. The leaves of the first gathering are the most valuable, and from these, Pekoe tea, which consists of the

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young leaf-buds, as well as black teas of the highest quality, are prepared. Those of the last gathering are large and old leaves, and, consequently, inferior in flavour and value.

The leaves vary considerably in size and form: the youngest leaves are narrow, convoluted, and downy; those next in age and size have their edges delicately serrated, with the venation scarcely perceptible; in those of medium and large sizes the venation is well marked, a series of characteristic loops being formed along each margin of the leaf, and the serrations are stronger and deeper, and placed at greater intervals.

The principal varieties of black tea are Bohea, which is the commonest and coarsest description. Congou, Souchong, Caper and Padre Souchong, and Pekoe, which are of the highest quality, the last consisting of the very young and unexpanded leaves, and which, when clothed with down, constitute flowery Pekoe.

The principle varieties of green tea are Twankay, Hyson-skin, Young Hyson Hyson, Imperial, and Gunpowder, which, in green tea, corresponds with flowery Pekoe in black. Imperial, Hyson, and Young Hyson, consist of the second and third gatherings, while the light and inferior leaves, separated from Hyson by a winnowing machine, constitute Hyson-skin, a variety in considerable demand amongst the Americans.

There is but one species of the tea-plant, from which the whole of the above, and many other varieties of tea, are obtained, the differences depending upon soil, climate, weather, age of the leaves, and mode of preparation.

The plants from which black teas are prepared are grown chiefly on the slopes of hills and ledges of mountains;* while the green tea-shrubs are cultivated in manured soils. Upon this circumstance many of the differences between the two varieties depend.

Other differences are occasioned by the processes adopted in the preparation and roasting of the leaves. Thus, while black tea is first roasted in a shallow iron vessel, called a *kuo*, and secondly in sieves, over a bright charcoal fire, green tea does not undergo the second method of roasting, but only the first—that in the *kuo*.

An important part of the manufacture of tea consists in the *rolling* the leaves, so as to impart to them their characteristic twisted shape. This is effected by subjecting the leaves to pressure, and rolling by the hands in a particular manner. The first effect of the application of heat to the leaves in the *kuo*, is to render them soft and flaccid; when in this state, they are removed from the vessel, and submitted to the first rolling—an operation which, after the renewed action of the *kuo* on each occasion, is three or four times repeated, with superior teas, before the process is considered to be complete.

The following observations on the scenting of tea are extracted from Mr. Ball's "Account of the cultivation and Manufacture of Tea in China":—

"The Chinese seem universally to agree, in ancient as in modern times, that no factitious scent can be given to tea which at all equals its natural fragrance; in short, they say, 'that only common tea requires scenting.' Those persons who have had the opportunity of drinking some of the finest kinds of Souchong tea will perhaps agree with the Chinese in this opinion. There are, however, many scented teas, which, so far from being inferior, are even costly, and much esteemed, both in China and in Europe. Of these the *Chu Lan*, or Cowslip Hyson, may be considered the best.

"The tea about to be scented must be taken hot from the last roasting, (which immediately precedes the packing,) and poured into a Hyson chest, so as to form a layer of two inches in height from the bottom; a handful or more of the fresh flowers (already separated from the stalks) is then strewed over the tea. In this manner the tea and flowers are placed in layers, until the chest is quite full. The mouth of the canister is then closed, and thus the tea remains for twenty-four hours. The proper proportion is three catties of flowers to one hundred catties of tea. The next day, the chest is emptied, when the tea and flowers are mixed together; they then undergo the process of *Poey*,* about three catties being put into one sieve. The *Poey Long*, is completely closed, and the tea and flowers are thus roasted about from one to two hours, or rather, until the flowers become crisp. The flowers are then sifted out, and the tea packed. If the tea requires any further scenting, fresh flowers must be used, and the process repeated as before. The tea thus prepared is then mixed with other tea, in the proportion of one part of scented tea to twenty of plain. The whole is then slightly heated in a *kuo* (*chao*), and when packed, constitutes the description of tea denominated in England Cowslip Hyson. Tea may be scented at any time with this kind of tea, but it must be previously heated or roasted about two hours.

"The mode of scenting black tea differs from that of green, and so far as I understand, there are two or three methods of performing this process. The Souchong or Caper teas, the Tet Siong, and other teas of the cowslip flavor, are also scented with the *Chu Lan* flower, (*Chloranthus inconspicuus.*)

"After gathering, the flowers are separated from the stalks as before, when some people dry them in the sun; but the best mode is to dry them in a Poey Long, over a slow fire, taking care not to change the yellow colour of the petals. When dried they are put aside to cool, and are afterwards reduced to powder. If this powder, the scent of which is very powerful, be sprinkled over the leaves previously to the last or two last roastings and rollings, in the process of Poey, the tea will be highly scented; but this is an expensive mode, on account of the additional quantity of flowers required, and therefore is seldom practised. The usual mode is by sprinkling a small quantity of this powder over the tea during the last process of Poey, which takes place previous to packing. A small white powder, frequently found in black teas of the caper flavour, cannot have escaped the observation of the tea-dealers in England; this powder is that of the Chu Lan flower, whose colour has been changed to white in the process of Poey.

"There is another scented tea, of excellent flavour, which is made in small quantities, and occasionally sent to foreigners as presents. This is a Souchong tea, scented with the flower of the Dec Sheem, (*Gardenia florida.*)

"There are two other scented teas, also of fine flavour, both Souchong-teas, the one scented with the Quy-fa, or Kuey-hoa, (*Olea fragrans.*) and the other with the Moo-Ly-Hoa. (*Jasminum Sambac.*) Some people say that these three last teas are mixed with the flowers, as the Hyson tea is mixed with the Chu Lan, and are scented in the same manner. But others say that two sieves are placed in the Poey Long, the lower one containing the flowers, and the upper one the tea. The latter is the mode in which the Pac Sheem tea, to which I have previously alluded, is scented. These are all the flowers with which I am acquainted, which are employed to scent tea, but in the Keun Fang Pu, and Quang Tong Chy, (or Canton

* There is a range called the Bohea mountains, from which we presume Bohea tea takes its name.

* The roasting of the leaves in a sieve over charcoal fire.

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Geographical History.) many others are enumerated as eligible for that purpose. These works also observe that flowers so used should be full blown."

M'Culloch, in his "Commercial Dictionary," draws an interesting parallel between the vine and the tea-plant:—

"Considered as an object of agricultural produce, the tea-plant bears a close resemblance to the vine. In the husbandry of China, it may be said to take the same place which the vine occupies in the southern countries of Europe. Like the latter, its growth is chiefly confined to Hilly tracts, not suited to the growth of corn. The soils capable of producing the finest kinds are within given districts, limited and partial. Skill and care, both in husbandry and preparation, are quite as necessary to the production of good tea as to that of good wine.

"The best wine is produced only in particular latitudes, as is the best tea, although perhaps the latter is not restricted to an equal degree. Only the most civilized nations of Europe have as yet succeeded in producing good wines, which is also the case in the East with tea; for the agricultural and manufacturing skill and industry of the Chinese are there unquestionably pre-eminent. These circumstances deserve to be attended to in estimating the difficulties which must be encountered in any attempt to propagate the tea-plant in colonial and other possessions. These difficulties are obviously very great, and perhaps all but insuperable. Most of the attempts hitherto made to raise it in foreign countries were not indeed of a sort from which much was to be expected. Within the last few years, however, considerable efforts have been made by the Dutch government of Java to produce tea on the hills of that island; and having the assistance of Chinese cultivators from Fokien, who form a considerable part of the emigrants to Java, a degree of success has attended them beyond what might have been expected in so warm a climate. The Brazilians have made similar efforts, having also, with the assistance of Chinese labourers, attempted to propagate the tea-shrub near Rio de Janeiro, and a small quantity of tolerably good tea has been produced; but owing to the high price of labour in America, and the quantity required in the cultivation and manipulation of tea, there is no probability, even were the soil suitable to the plant, that its culture can be profitably carried on in that country. It may, perhaps, succeed in Assam, where its culture is now being attempted; for labour is there comparatively cheap, and the hilly and table lands are said to bear a close resemblance to those of the tea districts of China; but we are not sanguine in our expectations as to the result."

"All the black teas," says M'Culloch, "exported (with the exception of a part of the Bohea grown in Woping, a district at Canton) are grown in Fokien, a hilly, maritime, populous, and industrious province, bordering to the north-east on Canton. Owing to the peculiar nature of the Chinese laws as to inheritance, and probably, also, in some degree, to the despotic genius of the government, landed property is much subdivided throughout the empire; so that tea is generally grown in gardens or plantations of no great extent. The leaves are picked by the cultivator's family, and immediately conveyed to market, where a class of persons, who make it their particular business, purchase and collect them in quantities, and manufacture them in part: that is, expose them to be dried under a shed. A second class of persons, commonly known in the Canton market as the "tea-merchants," repair to the districts where the tea is produced, and purchase it in its half-prepared state, from the first class, and complete the manufacture by garbling the different qualities; in which operation, women and children are chiefly employed. A final drying is then given, and the tea packed in chests, and divided according to quality in parcels of from 100 to 600 chests each. These parcels are stamped with the name of the district, grower, or manufacturer, exactly as is practised with the wines of Bordeaux and Burgundy, the indigo of Bengal, and many other commodities; and from this circumstance get the name of *chops*, the Chinese term for a seal or signet.

"The greater part of the tea is brought to Canton by land carriage, or inland navigation, but chiefly by the first; it is conveyed by porters; the roads of China, in the southern provinces, not generally admitting of wheel carriages, and beasts of burden being very rare. A small quantity of black tea is brought by sea, but probably smuggled, for this cheaper mode of transportation is discouraged by government, which it deprives of the transit duties levied on inland carriage. The length of land-carriage from the principal districts where the green teas are grown, to Canton, is probably not less than 700 miles; nor that of the black tea, over a mountainous country, less than 200 miles. The tea-merchants begin to arrive in Canton about the middle of October, and the busy season continues until the beginning of March, being briskest in November, December, and January."

There is another particular to which the comparison between the vine and tea-plant, made by Mr. M'Culloch, may be extended, namely, the general use of the infusion made from the leaves of the tea-plant, by the people of various nations of both the old and new worlds.

In China, as appears from the following extract, tea is the common beverage of the people. The late Sir George Staunton informs us "that tea, like beer in England, is sold in public-houses in every town and along public roads, and the banks of rivers and canals, nor is it unusual for the burdened and weary traveller to lay down his load and refresh himself with a cup of warm tea, and then pursue his journey."*

"The wealthy Chinese simply infuse the leaves in an elegant porcelain cup, which has a cover of the same material; the leaves sink to the bottom of the cup, and generally remain there without inconvenience, though occasionally some may float or rise to the surface. To prevent this inconvenience, sometimes a thin piece of silver, of filagree, or open work, is placed immediately on them. Where economy is necessary to be studied, the teapot is used. The wealthy Japanese continue the ancient mode of grinding the leaves to powder: and after infusion in a cup, 'it is whipped with a split bamboo, or denticulated instrument, till it creams, when they drink both the infusion and powder, as coffee is used in many parts of Asia.'"†

The infusion made from tea contains gum, glucose or saccharine matter, a large quantity of tannin, and a peculiar nitrogenized principle called *theine*, which is identical with *caffeia*, and upon the presence of which many of the properties of tea depend.

The amounts of gum and tannin contained in a given sample of tea, afford data by which its quality may be determined.

The per-centage of these substances may be obtained in the following manner:—One hundred grains of tea, dried by means of a water-bath, are to be boiled for some time in about a quart of distilled water; this dissolves out the gum and tannin, but does not affect the lignin, which, re-dried in the same way at a temperature of 212° Fahr., and weighed, gives the amount of that substance present in the

* Lord Macartney's Embassy to Pekin, vol. ii., p. 96.
† Ball on the Cultivation and Manufacture of Tea, p. 15.

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hundred grains, and shows, by the loss of weight, the combined quantities of the gum and tannin. The decoction is now to be evaporated and the residuum treated with alcohol; this will take up the tannin and colouring matter, but will leave the gum, the weight of which being ascertained, after drying, gives the per centage of tannin.

Should it be desired to estimate the quantity of tannin separately, this may be effected either by evaporating the alcoholic solution and drying the residue in the ordinary way, or else by the precipitation of the tannin from the decoction, by a solution of gelatine. The precipitate being washed and dried at a steam-heat, indicates the quantity of tannin, forty grains of which are contained in 100 of the precipitate.

The determination of the amount of nitrogen in any tea should form part of a rigid analysis; for this purpose, 100 grains dried in a water-bath until it ceases to lose weight, is to be incinerated with soda-lime, and its contents in nitrogen then ascertained.

While the average amount of nitrogen in tea exceeds five per cent., that in sloe, hawthorn, and elder leaves but seldom exceeds three per cent., and in the first two is always much under this.

The following is the method of proceeding adopted by Mr. Mitchell in his "Treatise on the Falsification of Food," p. 169, for the detection of the amount of theine:—"the amount of theine in the tea was ascertained—(that is to say, the comparative amount in many samples, not the whole quantity)—by completely exhausting 100 grains (dried at 212°) with water. This solution, whilst warm, had a slight excess of diacetate of lead added to it, then a little ammonia, and the whole was boiled for a few minutes, then filtered, and a stream of sulphuretted hydrogen passed in until in excess; the solution was again filtered, and evaporated at a gentle heat to a syrupy consistence, when nearly pure theine was deposited on cooling. The mother liquor furnished yet another quantity on further evaporation and cooling. The theine so obtained was dried between folds of fine blotting-paper, exposed to a heat of 212°, and then weighed.

"The above process is essentially Peligot's, who further determines the amount of theine yet remaining in the mother liquor by means of a standard solution of tannin. This process is not at all necessary in this method of investigation."

Lo-Yu, a learned Chinese, who lived in the dynasty of Tang, A.D. 618 to 906, gives the following agreeable account of the qualities and effects of the infusion of the leaves of the tea-plant:—

"It tempers the spirits, and harmonizes the mind; dispels lassitude, and relieves fatigue; awakens thought, and prevents drowsiness; lightens or refreshes the body, and clears the perceptive faculties."

The Adulteration of Tea.

A very considerable amount of skill and ingenuity are displayed, as we shall hereafter perceive, both at home and abroad, in the adulteration of tea, as well as in the manufacture of spurious articles in imitation of it. The devices resorted to by the Chinese in the preparation of many descriptions of tea, arise from the high prices which several of these command, while the enormous duty exacted by the legislature on all descriptions of tea imported into this country, operates as a strong inducement to adulteration.

We propose to treat first of black tea and its adulterations.

The chief adulterations to which black tea is subject consist in the use of leaves other than those of tea, in the re-preparation of exhausted tea-leaves, and in the employment of substances, either for the purpose of imparting colour and astringency to the infusion, or to glaze and face the surface of the dried leaves, so that they present an improved appearance to the eye.

On the Use and Detection of Leaves other than those of the Tea-plant.

It has been stated that the Chinese not unfrequently make use of the leaves of other plants besides those of tea, and in particular the leaves of *camellia Sasanqua* and *chloranthus inconspicuus*.

Dr. Dickson* writes,—"The Chinese annually dry many millions of pounds of the leaves of different plants to mingle with the genuine, as those of the ash, plumb, &c.; so that all spurious leaves found in parcels of bad tea, must not be supposed to be introduced into them by dealers in this country. While the tea-trade was entirely in the hands of the East India Company, few of these adulterated teas were shipped for this country, as experienced and competent inspectors were kept at Canton to prevent the exportation of such in the Company's ships; but since the trade has been opened, all kinds find a ready outlet; and as the demand often exceeds the supply, a manufactured article is furnished to the rival crews."

It has been repeatedly ascertained that the leaves of various British plants are sometimes used in this country in the adulteration of tea.

The leaves of the following species have been detected from time to time in samples of tea of British fabrication:—beech, elm, horse-chesnut, plane, bastard plane, fancy oak, willow, poplar, hawthorn, and sloe.

The leaves are dried, broken into small pieces, and usually mixed with a paste made of gum and catechu; afterwards they are ground and reduced to powder which, when coloured with rose-pink, is mixed either with the dust of genuine tea, or with inferior descriptions of black tea.

The plants from which black teas are prepared are grown chiefly on the slopes of hills and ledges of mountains: the leaves are obtained in three, and in some cases, even four gatherings, those of medium size and age being chiefly used for the great bulk of the black tea—viz., the congous and souchongs: they are dried either under covered sheds, open at the sides, which is the best method, or else by exposure to the sun. This process is a somewhat lengthened one, and during it, a degree of fermentation is set up, which is intimately associated with the colour, scent, and flavour of the leaves. Lastly, the leaves are subjected to a double process of roasting; first in a shallow iron pan, termed a *kuo*, an operation which is repeated two or three times, as may be necessary; and second, in sieves called *pocy longs*, over a bright charcoal fire.

The shrubs which furnish the leaves from which green tea is prepared are cultivated in manured or garden soils; the leaves are greener, more tender, and juicy, and two gatherings of them only are made; "the first begins between the 20th of April and the 5th of May, and lasts for about ten or fifteen days; and the second at the summer solstice." After gathering, the leaves should be dried and roasted as soon as possible, in fact, the same day, that is, before the slightest fermentation has had time to set in, all exposure to the air being unnecessary, and to the sun injurious. During the roasting, which is repeated once or twice in the *kou* only, the second method—viz., that in the *pocy longs*—not being practised, the leaves are at the same time fanned, to hasten the drying, by dissipating the moisture which rises during the operation.

Such is the general statement of the cultivation and preparation of black and green teas. The same dis-

* Article "Tea" in Penny Cyclopædia.

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tinctions and care are not always, however, observed; frequently the same shrubs, and even the same leaves, are made to furnish both black and green teas of different qualities.

The development of the characteristic colour of the leaves of green tea is stated to take place during the third roasting in the *kuo*, the leaves at the end of the second roasting being of "a dark olive colour, almost black."

"In the third roasting" says Mr. Ball, "which is, in fact, the final drying, the heat of the fire was again diminished, and reduced to the degree which the hand can bear for some seconds without much inconvenience; the quantity put into the *kuo* was greatly increased, and the time of roasting regulated by means of the instrument denominated a *che kuang*. The fanning and the mode of roasting were the same as in the final part of the second roasting. It was now curious to observe the change of colour which gradually took place in the leaves, for it was in this roasting that they began to assume that bluish tint, resembling the bloom on fruit, which distinguishes this tea, and renders its appearance so agreeable.

"Thus it is obvious that the peculiar colour of green tea does not properly arise from the admixture of colouring matter with the leaves, but naturally out of the process of manipulation."*

Mr. Jacobson writes,—

"Now the colour becomes greener and brighter; but, properly speaking, the infused leaf only is green, the dry leaf is bluish. As the drying progresses, the leaves assume a light blue tinge, resembling the bloom of grapes."†

The principal varieties of green tea are Twankay, an inferior description, Hyson, Young Hyson, Hyson Skin, Gunpowder, and Imperial; all these, except the Twankay, are obtained from unsorted Hyson, or Mao Cha, in the manner described by Mr. Ball and Tien Hing.

"In this state (that is, after the third roasting, and the production of the requisite colour)," continues Mr. Ball, "the tea is usually packed in chests in the tea country, and called Mao Cha, from its being unsorted. The Ching Cha is the Hyson tea, after the Hyson-skin, Young Hyson, and Gunpowder have been separated from it. Both kinds are sold in the tea country, though it is commonly sold by the farmers and peasantry in its gross or unsorted state of Mao Cha; and from the samples of this tea which I have seen at Canton, I imagine that many Hysons are sold to foreigners in this state, without any further sifting or separation."

"In about a fortnight," Tien Hing observes, "every farm has completed its harvest, and sends its tea to market; at the same time the numerous factors attend the different villages to make their purchases. There are all the various kinds of tea sold—the Mao Cha, the Ching Cha, the picked, the unpicked, the garden, and the hill-tea, and the different kinds of Singlo tea; so that it requires a complete acquaintance with the leaf and colour to be enabled to make a judicious selection. When the factors have concluded their purchases, they carry their tea home, where it is sifted, winnowed, and assorted into different kinds suited to the foreign markets.

"The large closely-twisted leaves, of nearly equal size and brightness of colour, form the Hyson tea.

"The large, open, or coarsely-twisted leaves, and also the large round, knobby leaves, of nearly equal colour, form the superior Hyson-skin teas; and the thin twisted leaves, of good colour, with the yellow and broken leaves, the middling kinds.

"The small, round, closely-curled leaves, which are bright in colour, form the round Gunpowder; the still smaller and more closely-curled leaves, the Che Ma, the hemp-seed, or small imperial Gunpowder.

"The broken leaves, which are very thin and small, and of a wiry nature, form the U Chien, or Young Hyson. The fine dust, and part of a kind of chaffy dust, is sold in the tea country; also at King-te-ching, the celebrated town for the manufacture of porcelain, and other places. The remainder of the dust is mixed with common Hyson skin."

Twankay tea is grown in the province of Kiang Nan; its manipulation does not differ essentially from that of Hyson tea, but is performed with less care.

Tien Hing* gives the following account of its preparation:

"The Senglo tea is grown in all parts of Kiang Nan, but Hoang Shan and Tuen Ky produce the best. The leaves begin to bud every year, about the 5th of April, (Tsing Ming,) and are gathered about the 20th of April, (Ko Yu.) It is gathered by whole branches at a time, and the leaves and stalks are afterwards stripped off rudely with the hands. It is then roasted in a *kuo*, and rolled indifferently with the hands or feet. It is gathered and roasted every day, and sold as soon as made. The factors who purchase it carry it home, and roast it again two or three hours, when it is sifted (to take away the dust) and packed in canisters. Some of the factors use charcoal, others wood; and there are some petty dealers, who do not roast it immediately, but pile it up in their houses, and afterwards roast and pack it."

Adulteration of Green Tea.

Although, as appears from the evidence quoted, there is good reason for believing that there really is such a thing as a genuine *green* tea, yet there are also conclusive facts to show that the green colour is very frequently imparted by artificial means.

Before adducing any observations of our own, we will cite the remarks and statements made by various writers on this point.

In Dr. Horsfield's translation of a Dutch work on the subject of the cultivation of tea in Java, the following dialogue occurs:—

Visitor.—Is it indeed the case that tea is so much adulterated in *China*.

Superintendent.—Unquestionably, but not in the interior provinces, for there exist rigid laws against the adulteration of tea; and all teas, as they come out of the plantations, are examined on the part of the government, to determine whether they are genuine: but in Canton, which is the emporium of teas, and especially at Honan, many sorts, indeed most teas, are greatly adulterated, and that with ingredients injurious to health, especially if too much of these ingredients be added. This is especially the case with the *green* tea, in order to improve the colour, and in this manner to add to the value of the teas in the eyes of the common consumers.

Visitor.—Are these ingredients known?

Superintendent.—Most of them are certainly known: they have been communicated to government, (the Dutch government) while at the same time the privilege has been requested that they might not be employed here; and although this occasions loss, the request has been granted, and it has been ordered by government, that not the least admixture should take place, either to improve the colour or taste of the tea, even in such cases where this might be desirable.†

Dr. Royle writes,‡ "The Chinese in the neighbourhood of Canton are able to prepare a tea which can

* Loc. cit. p. 220.

† Handbook, p. 426.

* Ball, Loc. cit, p. 256.

† Essay on the Cultivation and Manufacture of Tea in Java Translated from the Dutch.

‡ Tea, Medicinal and Dietetical.—*Penny Cyclopedia.*

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be coloured and made up to imitate various qualities of green tea, and large quantities are thus yearly made up."

"Young Hyson," states Mr. Davis, "until spoiled by the large demand of the Americans, was a delicate genuine leaf, and as it could not be fairly produced in any large quantities, the call for it on the part of the Americans was answered by cutting up and sifting *other* green teas through sieves of a certain size, and as the Company's inspectors detected the imposture, it formed no portion of their London importation. But the abuse became still worse of late for the coarsest *black* tea-leaves have been cut up, and then *coloured* with a preparation resembling the hue of green teas."

"But this was nothing," continues Mr. Davis, "in comparison with the effrontery which the Chinese displayed in carrying on an extensive manufactory of *green teas* from *damaged black leaves*, at a village or suburb called Honân.

"The remission of the tea-duties in the United States occasioned, in the years 1832 and 1833, a demand for green teas at Canton, which could not be supplied by arrivals from the provinces. The Americans, however, were obliged to sail with cargoes of green teas within the favourable season; they were determined to have the teas, and the Chinese were determined that they should be supplied. Certain rumours being afloat concerning the manufacture of green tea from old black leaves, the writer of this became curious to ascertain the truth, and with some difficulty persuaded a Hong merchant to conduct him, accompanied by one of the inspectors, to the place where the operations were carried on. Entering one of these laboratories of fictitious Hyson, the parties were witnesses to a strange scene. The damaged black tea-leaves, after being dried, were transferred to a cast-iron pan, placed over a furnace, and stirred rapidly with the hand, a small quantity of turmeric, in powder, having been previously introduced. This gives the leaves a yellowish or orange tinge, but they were still to be made green. For this purpose, some lumps of fine blue were produced, together with a substance in powder, which, from the names given to them by workmen, as well as their appearance, were known at once to be *Prussian blue* and gypsum. These were triturated finely together with a small pestle, in such proportions as reduced the dark colour of the blue to a light shade; and a quantity equal to a tea-spoonful of the powder being added to the yellowish leaves, these were stirred as before over the fire, until the tea had taken the fine bloom colour of Hyson, with very much the *same scent*. To prevent all possibility of error regarding the substances employed, samples of them were carried away from the place. The Chinese seemed quite conscious of the real character of the occupation in which they were engaged; for on attempting to enter several other places where the same process was going on, the doors were speedily closed upon the party; indeed, had it not been for the influence of the Hongist who conducted them, there would have been little chance of seeing as much as they did."

Mr. Bruce states, that "in the last operation of colouring the green teas, a mixture of sulphate of lime and indigo, very finely pulverized, and sifted through fine muslin, in the proportion of three of the former to one of the latter, is added: to a pan of tea, containing seven pounds, about half a tea-spoonful of this mixture is put, and rubbed and rolled along with the tea in the pan for about an hour. The above mixture is merely to give it a uniform colour and appearance. The indigo gives it the colour, and the sulphate of lime fixes it. The Chinese call the former *youngtin*; the latter, *acco*."

Miscellaneous Correspondence.

THE AUSTRIAN REMEDY FOR CHOLERA.

To the Editor of THE LANCET.

SIR,—The chief commissioner of the Birmingham police lately placed in my hands a bottle of cholera medicine, which he had received from the head of the Austrian police, as being in use in that country under the influence of the government, it having been found to be a specific.

The printed description stated, "that the inventor had been allowed in 1831-2 by the government to try its efficacy on some convicted criminals, and that the result was the recovery in *every* instance; and that many thousand persons having since been cured by it, the government, in 1849, commanded its employment in several large provinces, in prisons and public establishments, including the police, *and that not a single person who took the specific where any hope of life remained failed to recover*, and that, too, without the slightest detriment to general health." This was apparently so decisive of its great value, that I determined to analyze it, and publish its components for the use of the world at large.

I find in the fluid ounce,—

	Grains.
Sulphuric acid (density 1·845)	19·
Nitric acid (density 1·500)	12·
Sugar	24·
Water	406·5

Fluid ounce, specific gravity, 1.055 = 461·5

The sugar is now that of grapes, but it has no doubt been altered by the acids.

The mode of administration is said to be as follows:—

As soon as any premonitory symptoms of cholera show themselves, one teaspoonful of the mixture is given, diluted with four or five of water; cold water is also freely drunk immediately after. At the end of half an hour, in mild cases, the dose is repeated, and this is often all that is required.

The original anguish of the patient is generally found to undergo a remarkable diminution soon after the first dose; he becomes warmer, and the pain in the stomach and breast rapidly abates, and then ceases. In the same degree in which the patient recovers his warmth, he becomes conscious of thirst, and feels a longing for cold water: in order to satisfy this, a teaspoonful of the acid is mixed with a pint of water, and of this the patient is allowed to take *ad libitum*.

When the symptoms do not rapidly yield, the dose is repeated at short intervals in the way already described. Where vomiting does not occur, four or five spoonfuls generally effect the cure. When, however, the phenomena of collapse have already set in, with continual vomiting, diarrhœa, &c., the acid mixture must be given in double doses—namely, two tablespoonfuls at a time in four or five of water, and repeated after every attack of vomiting until the sickness ceases and the cramps abate; after the vomiting has ceased, the medicine must still be repeated every quarter of an hour until at least six spoonfuls of the mixture have been retained on the stomach. Cases have occurred in which it has been necessary to give as many as ten to fourteen spoonfuls before vomiting ceased. Cessation of pain, abatement of cramp, and a warm perspiration, are the first signs of amendment. Should quiet sleep set in, it must not be interrupted. Cold water may be freely given, unless perspiration has commenced, when no more should be given than necessary to abate thirst. All warm or spirituous liquors should be avoided as so much poison.

This horrible complaint has hitherto baffled all

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practitioners, and eluded every mode of treatment that I have seen practised; but this remedy comes with so good a character, and is so unlike those I have hitherto heard of, that I think it well worth a trial; nor can I refrain from mentioning that it has been remarked that Asiatic cholera does not prevail in cider counties, where the general beverage has some resemblance to this medicine, though weaker in degree.

I am, Sir, your obedient servant,

WILLIAM HERAPATH.

CHLOROFORM IN INDIA.

To the Editor of THE LANCET.

SIR,—I have been much interested lately in reading in THE LANCET various discussions and opinions relative to the use of chloroform, and thought perhaps it might not be uninteresting to your readers were I to contribute my experience of its effects on the people of this country, whom I consider more susceptible of anæsthetic agents, and more likely to be unfavourably influenced by them than Europeans; yet, though I have used chloroform in numerous instances, when operating on the natives of this country, I never found any bad effects to follow. The cases I now inclose for insertion in THE LANCET may be highly interesting as regards military surgery, displaying the nature of the wounds likely to be inflicted by cavalry in action, and the extraordinary recoveries that the natives of this country make from wounds of this description.

'In the action where these wounds were inflicted, there were 114 sabres employed against 350 rohillas, and the whole business was over in the course of half an hour. During the time there were 125 of the enemy killed, and 49, as per list enclosed, wounded; whilst we, on our side, had 4 European officers and 16 men wounded; none killed. 'This occurred at Gowrie, against the impostor Appa Sahib, where I accompanied my regiment, the 2nd Nizam's Cavalry, into action, having my horse cut down under me, so that we doctors are not at all times exempt from the good things going. After attending to my own wounded, I proceeded to those of the enemy, and out of these 49 cases, I had 18 amputations to perform, all under the influence of chloroform; and, with the exception of 3 cases out of the 49, every man recovered; and many fought against us only the other day, in defending the Fort of Dharoor, in his Highness the Nizam's country, which we lately captured, situated about twenty miles from this place. I regret I have not leisure at the present moment to go minutely into each of these cases; but, nevertheless, the very mention of them in your widely-circulated journal (which, by the way, finds its way to me by every overland mail) may be of interest to your medico-military readers, tending to show, as they do, the enormous amount of injury, in a surgical point of view, the natives of this country will resist.

I am, Sir, yours obediently,

W. B. M'EGAN, M.D.,

Assistant Surgeon to his Highness the Nizam's 2nd Regiment of Cavalry.

THE SURREY COUNTY LUNATIC ASYLUM.

To the Editor of THE LANCET.

SIR,—I have lately had the pleasure of inspecting the Wards of the Surrey Asylum—an institution which, whether considered with reference to the architectural beauty of the edifice, and its adaptation to its purpose, or to the admirable way in which it is conducted, deservedly ranks amongst the first and foremost in the kingdom. The beauty of the site, commanding an extensive prospect over a luxuriant country, its park-like scenery, and the lovely walks which encircle it, can hardly fail to have a soothing effect upon the minds of those inmates who are at all capable of deriving pleasure from the cheering influence of nature's fairest aspect.

How admirably this first impression, so salutary in itself, is seconded *within* the institution, the attentive visitor will readily perceive on inspection. Everything requisite for carrying out the judicious treatment of that malady, which, above all others, require unremitting care, attention, and kindness, is here to be met with in no ordinary degree. The system is that which is now known as the "non-restraint" system; in connexion with which the greatest exactness prevails as to the classification of the patients, their moral management, their comfort, and (as far as may be) their happiness also. I have seldom derived greater pleasure than from witnessing, as I did on Friday last, the female patients celebrating a kind of anniversary festival, on the lawn in front of the establishment, when music and the dance formed a part of the various amusements in which these unfortunate creatures appeared to forget their miseries, and to mingle, with every sentiment of good feeling, amongst those to whose fostering care they owed a deep debt of gratitude. I had, on a previous visit, observed the judicious manner in which the worthy superintendent (Mr. Diamond) soothed some highly-excited patients by a few kind words: and, indeed, in carrying out a system where all—even the most violent—enjoy the use of freedom and liberty, much must always depend upon the discretion, the kindness of heart, and the cool but decisive judgment of the resident officer. On Friday the medical men and their families joined with the patients in their innocent festivities; and it must have afforded no small gratification to Sir A. Morison, to observe the decorum and good conduct which prevailed amongst that class of patients to whose welfare he has devoted all the energies of a powerful and benevolent mind. The pleasing scene above described was witnessed by Dr. Rowland, of Charing-cross Hospital; Richard Grainger, Esq., Sanitary Commissioner; Dr. J. W. Jones, and many other eminent individuals, and is an evident demonstration of the extent to which the system of "non-restraint" may be successfully carried out. In this institution the greatest confidence is apparently placed in the patients, while, nevertheless, an unobserved but constant surveillance is exercised. The fireplaces are all open, and the patients have the use of the usual knife and German-silver fork; kettles of boiling water, and the usual apparatus for cooking, are found, without fear of the patients using them as weapons of destruction; and the almost entire absence of dangerous accidents demonstrates that such a system is safer than all the chains and fetters with which the unhappy victims of mental maladies were formerly loaded. On Sunday the patients bore their share with becoming attention in the sacred services of the sanctuary, which I have always observed to have a soothing and favourable influence in these cases. Nothing, indeed, can be more clear than the fact, that in those patients whose minds have become disturbed by religious melancholy, it is not genuine religion, but erroneous and distorted views of it, that have shaken the balance of the mind.

As the author of a system which I here found in full and successful operation, I have felt it both a duty and a pleasure to record these few impressions of my recent visit to the Surrey County Lunatic Asylum, with its 900 patients; and, in the hope that such a mode of management will ere long be co-extensive with the malady that requires it, I am,

Your obedient servant, R. GARDINER HILL.

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MORE WONDERS IN MEDICINE.

To the Editor of THE LANCET.

SIR,—in your journal,* under the title of "More Wonders in Medicine," you speak of a new way to cure an old disease recently discovered by M. Desterne, and refer to the *new* method of curing sciatica by cauterising the lobe of the ear.

Of M. Desterne's wonderful achievements I know nothing; but hope, for the sake of suffering humanity, that his new operation with the probe may be equally successful in the hands of English surgeons.

Of the application of *le cautère actuel* to the lobe of the ear, I am not quite so ignorant, having noted several cases of sciatica so treated at the St. Louis, by M. Malgaigne, who, if my memory fails me not, stated in one of his clinical lectures, that he had picked up the idea from an old Scotch author.

Be this as it may, the originator of the practice will not, I fear, have much claim on the gratitude of future generations. In my opinion, and in that of my friends who watched the cases with me, no real benefit was derived from the ear-frizzling, in those cases of sciatica the genuineness of which admitted not of a doubt. Of course the sudden and painful application of the *fer rouge* astonished the poor sufferers, and sometimes made them leap out of bed as if *le diable* had been getting in on the other side. The malingerers were cured, but the honest patients expressed themselves as being but little better on our next visit.

I recollect, some twelve or fourteen years ago, a man applied for admission into the Liverpool workhouse, feigning to be deaf and dumb, when the resident-surgeon, after a short examination, suddenly applied the red hot poker to his cheek, and the utterance of a few elegant epithets, which seemed to come from the very bottom of his grateful heart, left no doubt as to the skill of the chirurgeon and the potency of the remedy.

A few such cases as this under the care of some of the more imaginative Frenchmen, would doubtless cause quite a sensation, for with all due deference to the many great qualities of our jockeys at home, our brethren beyond the channel can beat them to nothing.

M. Piorry is an admirable jockey; but he does not ride on the same course as M. Malgaigne. One day in going the rounds of La Pitie, I was much amused with one of M. Piorry's feats, to which my attention was directed by my friend Mr. Septimus Lowe, of Lincoln. M. Piorry had got a patient with enlarged spleen, over which he percussed and marked out the boundaries, and then directed a dose of quinine to be administered; but before the magical essence of cinchona had well reached the stomach, he declared the spleen to have shrunk half an inch in its transverse measurement! So much for the actual cautery and quinine in the hands of the Parisians.

I am, sir, your humble servant,

D. MACKINDER.

* August LANCET, p. 163.

VACCINATION AND SMALL-POX.

To the Editor of THE LANCET.

SIR,—the interesting discussion on small-pox at the Medico-Chirurgical Society, and the doubts there expressed of the security afforded by vaccination, induce me to submit the following cases for the consideration of the profession, as any facts, however isolated, which would tend to make vaccination more secure, are, in my opinion, of importance.

A young lady, about twenty, the second daughter of a gentleman residing in this neighbourhood, after a country excursion was seized with rigors and other febrile symptoms, which eventuated in a smart attack of small-pox: the pustules were numerous but distinct, on the face, chest, &c., and much fear was entertained lest she should be marked. She occupied a large airy apartment in a large mansion, and her mother and I relying on the security of very careful vaccination of the other young ladies, did not altogether prevent the ingress of her sisters; three of them were attacked, and two, the eldest and youngest escaped, though equally exposed; on inquiry of the ladies' mother, (a most intelligent woman,) she informed me that she recollected distinctly that her eldest and youngest daughters had been tested by Boyce's method—i. e., re-vaccinated on the eighth day.

I mentioned this case lately to another lady, the mother of a large family, and she told me that her daughters had had small-pox after vaccination, and that one who had been re-vaccinated on the eighth day, according to Boyce's plan, had escaped.

I am, Sir, your obedient servant,

ANDREW NOLAN,
Wicklow, July, 1851. Surgeon to Wicklow co. Infirmary.

VACCINATION AND SMALL-POX.

To the Editor of THE LANCET.

SIR,—The following remarkable and highly interesting case occurred during my practice in the year 1824, one year after the publication of your invaluable journal; but I had not any desire at that period to interfere with your arrangements, or to obtrude myself upon the space of your then valuable columns, which have since become doubly more valuable from the long period which it has been in existence, and the very great and rapid progress it has made in medical literature. I have steadily taken in the journal from that period down to the present hour, therefore I am fairly entitled to speak of its merits as a medical work, and it does, without contradiction, stand upon the record as one of the best, one of the most useful, and one unequalled by any publication extant. Therefore I hope no other apology will be necessary for the purpose of introducing the case as above mentioned, particularly as the claims upon vaccination are at the present time disputed, or attempts made to lessen the value of its influence.

The subject of this communication was a female manumitted slave, brought from the Bahamas by a very excellent and pious person, the Rev. Mr. Wilson, one of the missionaries to those parts. The poor creature had lived in his family as servant over a period of seven years, and for her service he paid over to the slaveholder four dollars per month. She soon became attached to the family, and more particularly to the children, so that Mr. Wilson was anxious to bring her to England, and he could only do so but by paying the manumission money, which amounted to £100, which was paid April 2, 1824. She arrived in England with the family early in June, and soon after came to Winchester.

The small-pox was raging most furiously, pervading and invading almost every dwelling and every locality where it could find a victim to fasten upon, devastating and destroying to a very considerable and alarming extent, for the character of the poison was virulent in the highest degree, and where it became fairly developed it speedily exhibited its destructive powers, and the poor victim of its attack soon became prostrated. Yet, nevertheless, although vaccination was carried forward with zeal and determination by the practitioners of, and out of the city, yet very numerous casualties followed; for it was found difficult to check the disease in time.

Now, about this time, one of the children became attacked who was under the care of the poor crea-

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ture; I being sent for, immediately vaccinated her, as well as the children, and I had flattered myself that all would have escaped the dire plague; but not so—the poor black, although her arm presented a most magnificent specimen of vaccination, yet the virus of small pox soon manifested itself, and she soon came under its baneful influence; the skin became loaded with pustules, clustering together and presenting the true confluent type; every portion of the body became swollen, the features presented a most horrid spectacle, combined with the color of the skin; you could scarcely imagine you were contemplating the death of a human being; the limbs soon after were covered with large vesicular masses extending from head to foot, and as soon as one was ripped up, to allow the fluid to escape, so soon again were you called to perform the like act again; the fluid was of a dirty white colour. She soon became restless, and delirium soon supervened, and a few days longer her sufferings were relieved by death.

The singularity of this case consists in the dormant power of the virus of small-pox remaining in that state until vaccination had claimed the first position. And it is very probable that the poison was imbibed both by the child and the servant at the same time; yet its influence on the child was soon exhibited, and if a due absorption of the vaccine virus had entered the constitution so as to have given the system a protective quality and power, I do verily believe the attack of small-pox would have been greatly modified, if not counteracted altogether.

I think vaccination, to be effective, ought to be done by matter obtained from the original source of its formation. I have never vaccinated unless genuine from the Institution, and do not recollect any attack of small-pox afterwards.

I am, sir, your obedient servant,
JAMES FORDER, M.R.C.S.

ACTION OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—I have perused with extreme interest and satisfaction a report of the paper on the Inhalation of Chloroform, read by Mr. Dunn at the meeting of the Royal Medical and Chirurgical Society. Every one must, I think, admit that the author has given a most lucid exposition of the physiology of the nervous system in its most recent form; yet, having administered the chloroform at this hospital on very many occasions, I cannot, though fully agreeing with the learned author as to the great value of the agent as an anæsthetic, concur with him in his description of the systematic manner in which the agent produces its effects upon the nervous centres and their functions. As far as I have observed, the operation of chloroform is twofold, its primary action being that of a powerful stimulant, and so far from the motor function being arrested in the first instance, we have frequently found it violently excited, the patient requiring to be forcibly held to keep him quietly upon the operating table, the intellectual functions being at the same time in a state analogous to delirium. A perseverance in the application of the remedy, however, soon produces a very opposite condition—the stage, I should call it, of true anæsthesia, where the patient lies in a condition resembling profound sleep, where all sensation and voluntary motion is lost, and during which the heart's action is lowered, and, as I think, the blood congested in the heart and the great vessels. That the nutritive, secretory, or ganglionic system does not entirely escape, is evident from what takes place in what may be called the reactionary stage, in which I have observed vomiting to be the most frequent and general accompaniment. I am inclined, upon the whole, to believe that the action of chloroform assimilates in a remarkable degree to that of a powerful intoxicating agent, for drunkenness is a condition in which there is a considerable immunity to pain, as I have heard men in a state of intoxication, when wounded or injured, exclaim:—"You may cut me or do as you like," and I have found this to be no idle boast, as they have borne their sufferings exceedingly well. The difference is in this—the effects of the chloroform pass off very readily, whereas in drunkenness it requires hours to do so; this makes the chloroform so manageable and safe an agent, and hence, being free also from the moral debasement, its paramount advantage and utility in surgical operations. One great advantage of this agent should not be overlooked—viz.: that it makes your patient as manageable as ever you please; this in the case of children is a great point gained, where the cries and struggles of the little patient frequently add much to the anxiety and difficulty of the operation; and I may add, that I think chloroform is capable of rendering essential service in the treatment of dislocations. I well remember one case, under the care of the late Mr. R. Craven, where, in a dislocation of the head of the femur into the ischiatic notch, the slightest traction when the patient was placed in a state of insensibility was sufficient to restore the head of the dislocated bone to its natural position.

In conclusion, I may say that the practice of this institution fully justifies the high position which the use of chloroform has attained as the most valuable adjuvant known in the modern practice of surgery.

I am, sir, your obedient servant.
T. T. LAMBERT, House-Surgeon.

Hull Infirmary.

ON EXTRACTUM CARNIS.

To the Editor of THE LANCET.

SIR,—In THE LANCET, reprinted at New York for March, 1851, I find an article by Dr. Beneke on Extractum Carnis as a good medicine. In relation to that article, I shall expend 1s. 3*d*. postage, hoping that by giving an impulse to the doctor's design it might benefit mankind to the amount of millions. The River Plate, the most beautiful and most convenient (for small vessels, say 200 tons) in the world, might become the scene of the most useful commerce ever carried on, simply by a development of Liebig's idea. The united provinces of the River Plate—Buenos Ayres, Entre Rios, Tucumen, Cordova, &c. are literally oppressed with meat of the best description. One proprietor, Nicholas Aucherena, deceased, (his brother Miguel alive,) was lately supposed to have two millions of horned cattle, the annual increase killed for their hides, the meat left putrifying on the ground. Besides 40,000 horses, this farmer had 50,000 sheep, increase killed for their pelt. The number of horned cattle of my informant (I am just looking into his book) was 40,000 or 50,000, and who was only a farmer. An extensive killer kills 500 a day, and an ordinary killer about eighty or ninety. These numbers I am taking out of the gentleman's ledger. The meat is left on the ground to rot, while thousands are languishing for food. Will the wide philanthropy and commerce of England permit this? Now, when the expense of transport can be reduced to 1s. 3*d*. a head, will not something be done to save this most excellent food, and at the same time create a market for English goods? I have only to add, that while cattle, fowls, fish, are in such abundance, manufactured articles are so scarce, that men came, my informant thinks fifty miles, to see his husband, one holding up his hand in admiration of the wonder, while another declared it was no use, as he

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could lie as well on the ground. I shall conclude by mentioning that the country is remarkably healthy, except in tetanus, which is brought on by the slightest scratch, and that brimstone held in the mouth is regarded as a specific for stopping the progress of the disease; but it will not cure it when once fully established. Every family keeps the brimstone in readiness. What a field for enterprise in that most beautiful, abundant, healthy country, that only needs the Anglo-Saxon race to develop it!

I am, Sir, your constant reader,
(though in the Canada bush,)
E. B. KEENAN, M.D.

Canada, June 12, 1851.

THE OXIDE OF SILVER AND UTERINE HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—It is impossible for me, on reading the very interesting case of polypus of the uterus, by Mr. Chapman of Lower Tooting,* not to regret that that gentleman had not heard of the oxide of silver, or, if having heard of it, that he did not venture to employ it in restraining the almost constant uterine hæmorrhage, which, although she recovered, caused the patient to be "anæmiated and emaciated." How many years more will be required to convince the profession that in all cases of passive hæmorrhage, especially in that from the womb, whether that organ contains a polypus or a fœtus, they have the remedy in their own hands! If they will not believe one who can have no motive in misleading them—one who, at an advanced stage of a long professional life, dares any one to deny that he has been always faithful to his order and to his brethren—who, after a daily study, during nearly ten years, of the qualities of the oxide of silver, has only the good of his fellow-creatures in view when he proclaims, at much trouble and some pecuniary cost, as he has done more than once, the result of his anxious industry to his fellow-labourers in the vineyard—they must submit to be taught by him from time to time, till they consent to receive the evidence of one who has their best interests at heart, though he may be, perchance, a stranger—of one who would have gratefully thanked any friend for like information previous to the 10th of July, 1841; when, while searching for help, he first read of the oxide in THE LANCET, and which perfectly safe preparation is a specific, if there be one, in the slow bleedings which inevitably lead to disease and death. Two formal reports of its qualities have, at an interval of six years, been given to medical men, who, as the highly gifted author of *Household Words* (in allusion to other discoveries,) under the article of chloroform, well says, "are slow to adopt a new remedy, partly from an unwillingness to be instructed, and partly from that conservative instinct, which in some minds supplies the place of intelligent circumspection, as a safeguard against the dangers of innovation."

I am, Sir, your faithful servant,
JAMES EYRE, M.D.

OPIUM-TAKING.

To the Editor of THE LANCET.

SIR,—Seeing in your invaluable publication of last week a letter signed "Medicus," soliciting a little practical information as to the best mode of treating a confirmed opium-eater, &c., I beg to offer the following:—

It has been my lot to have sojourned for some time in China, which, as you, Mr. Editor, know, is the hot-bed of smoking and opium-eating; and I may say, without vanity, I have had more opportunities than any man of my age (thirty-seven) in seeing its effects, by prolonged usage, on the sanguineous, nervous, and biliary systems.

I then advisedly recommend "Medicus" to withdraw, *gradatim*, the stimulating and soothing doses of morphia, and substitute for it small doses of the tincture of lobelia inflata combined with the tartrate of antimony, these two medicines in combination altering to an extraordinary degree the disorganized condition of the brain and spinal cord; at the same time freeing the liver from its congested state, by alterative doses of mercury-with-chalk, and warm aperient salines. By steadily persevering in this treatment, I may confidently assert, from my experience, that "Medicus's" patient will soon present the "sana mens in sano corpore."

Mr. Editor, I fear your invaluable space will not permit me (knowing, as I do, the general pressure upon your columns) to enter upon the consideration of the physiological and pathological condition of the nervous system, as induced by the "use and abuse of that beneficial" or deleterious drug, opium, your correspondent simply demanding a practical suggestion.

I am, Sir, your obedient servant,
DONALD M'NAB BURNIR, M.D.

OPIUM-TAKING.

To the Editor of THE LANCET.

SIR,—In reply to the question of your correspondent "Medicus," I should say that it is no more "possible to reform a person who has been long addicted to the practice of taking opium," than it is to reform a patient who is paralyzed. Habitual intoxication is as decidedly a disease of the nervous system as paralysis, and as impossible to cure by an effort of volition; or, more correctly, it produces a disease of the nervous system almost as intractable as paralysis. Intoxication constitutes a *class* of diseases, of which there are two *orders*, and several *genera*.

The two *orders* are *narcosis* and *alcoholosis*, or those produced by narcotic and those produced by alcoholic excitants. The symptoms of these two orders are determined by the kind of excitants to which the patient has been addicted.

That the nervous system is primarily affected, and the parenchymatous structure is subsequently diseased, is so evident, that it requires no proof.

But the point to which I wish to direct your correspondent's attention is, that the two causes of intoxication, the narcotic and the alcoholic, are antagonistic or curative of each other; that, to a certain extent, they stand in the relation of poison and antidote. In delirium tremens from alcohol, for instance, opium is our antidote, and for habitual narcoticism, nothing in the way of remedy is so efficacious as alcohol.

If either narcotic or alcoholic excitants are indulged in exclusively, and in excess, the work of destruction, first of the functions of the nervous system, and next of the parenchymatous structure, is much more speedy and sure than if both are taken alternately, and in moderation. Hence the poor suffer more than the rich from exclusive narcoticism, because they are deprived of its antidote.

I knew a gentleman of the highest intellect, and of the most fervid eloquence, who took daily twelve grains of solid opium, without sustaining any perceptible injury, either in body or mind. He lived to old age, in the possession of his faculties to the last.

It is said of the Chinese opium-smokers, that, to the lower orders, the habit soon proves destructive; but the upper class indulge in the practice with comparative impunity.

* *Vide* Lancet, Aug. No. p. 111.

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As it may not be in the recollection of "Medicus," I would remind him of the case of a gentleman, very similar to that of his friend, which was related in THE LANCET some time since. In this, as in his case, the habit of opium-taking had been unwittingly acquired. He, too, felt "irritable, dejected, and prostrate in body and mind, and utterly incapable of discharging the ordinary duties and business of life," except under the inspiration of his siren drug, from the allurements of which he found it impossible to escape. But the disease having been developed, volition over it was powerless. In this state, his medical friend, whom he consulted, invited him to dine. After dinner, he plied him vigorously with claret, to the extent of a bottle or more. He had him conveyed to bed, *the worse* for his potation. The patient slept soundly, without his opiate, and awoke next morning, refreshed, and in better health and spirits than he had for a long time enjoyed. The doctor detained his patient as his guest another day, and in the evening he administered another dose of antinarcotic. The second dose operated equally well, and completed the cure.

It is true that "contraria contrariis et morbi morbis curantur;" but there is a fear lest "incidit in Scyllum, cupiens vitare Charybdim;" but it is also true, that "ubi unica via salutis, ea licet cum periculo est tentanda." It is moreover manifest that there are many more domestic, social, and prudential safeguards aginst alcoholic, than there are against narcotic intoxicants.

I remain, Sir, your obedient servant,

I. PIDDUCK, M.D.

OPIUM-TAKING.

To the Editor of THE LANCET.

SIR,—I feel deeply indebted to your correspondent, "Medicus," for bringing the case of the opium-eaters before the profession.* In one respect he has the advantage over myself. I am not aware that I have as yet met a single fellow-labourer in that department, and therefore I have had no opportunity of comparing others' personal experience with my own. In treating "delirium cum tremore" I have of course had ample opportunity of remarking what strong doses are required, and how very quickly afterwards on such occasions the drug may again be entirely dispensed with. I think on inquiry it would be found that the use of opium and its preparations has usually been resorted to in the first instance to relieve physical pain alone. In my case, as far as the mental effects of it are concerned, I would leave it off to-morrow; but having many years ago been initiated into its use in the form of "Dover's powder" to relieve the neuralgic pains of rheumatic gout and irritable bladder, I could find no effectual substitute; and perceiving that with its use mental irritability was also much relieved, I certainly was betrayed into taking opium in larger quantities subsequently, by reason not only of intense mental anxiety, but also because I was a houseless wanderer without the means of providing myself sufficient food, and what was worse, I had a family in the same predicament. Into darker scenes and more complicated wretchedness, I will not further enter. It has pleased the Almighty to remove the shadow from our path, and my now bright and happy home is of itself a sufficient repose.

I have long enjoyed most excellent health, and am capable of a great amount of fatigue, but no one can conceive the pains I suffer in my legs and arms if I attempt a night's rest without my usual dose. The *attempt* I have frequently made; I have fatigued myself excessively, smoked tobacco, and taken brandy, colchicum, and such-like, excessively, altogether and separate; but it was of no use; in fact, the greater the fatigue, the greater the pain.

Now, in one way only can I find there is a probability of ridding myself of my disagreeable necessity, so long as I continue in my good health; and that is, not to *divide* the daily dose—*not to take it in the form of drachms*. By this means I have reduced myself to an ounce at a time. I may as well remark, that I do not find the use of laudanum in any way interfere with my usual routine. I take a little malt liquor at dinner, and in the evening. Spirits I seldom touch, and wine is a thing I never cared to drink.

If opium-eating is a vice, the consumer alone is the principal sufferer. It never betrays its victim into those gross and sensual excesses which make the drunkard the pest of society. Something perhaps might even be said in favour of its moral tendencies; but although an apologist for its use, I am not its advocate, and would willingly get rid of the expense of it altogether.

I am, Sir, your very obedient servant,

SPES.

* Aug. LANCET, p 169.

OPIUM-TAKING.

To the Editor of THE LANCET.

A CORRESPONDENT in a late number of THE LANCET requires to know the best method of weaning a patient from the bad habit of opium-taking: I can afford him a little personal experience upon the subject. About twelve years ago I had for five or six years been suffering under great mental and bodily pain, and from repeated and great losses of blood had become completely anæmiated, with great dyspnœa, palpitation, œdema of the legs, &c.; and finding that nothing but opium would enable me to go through the professional duties of the day, that of necessity became my only comfort, and daily I took six grains of muriate of morphia, and frequently when up a great part of the night attending a case of midwifery, the quantity would amount to nine grains in twenty-four hours. After six years of suffering I underwent a severe operation, which happily relieved me from my bodily pain, and my health and strength so rapidly recovered that I was enabled to leave off the morphia almost immediately, by merely occasionally taking about half a grain, and supporting myself with frequent doses of sulphuric ether; in this way, at the end of three weeks I was well, and freed from opium. But I would not recommend so rapid a proceeding to any one else: I was sometimes almost frantic, and in a state of delirium tremens, which I was enabled to ward off entirely by a timely dose, and making blood very rapidly. I got through it that time quickly. I remained for eight years without opium until about four years ago, I unfortunately had a sharp attack of English cholera, with very considerable hæmorrhage, and I was compelled to fly to morphia. In three days all the dreadful accompaniments of opium taking had returned, and nothing less than four grains of muriate of morphia would satisfy me, and by that single illness my health and strength were so shaken that I could not leave off any opium until about six months ago, when I became much restored, and of course began to reduce the opium, but by degrees; and am now only taking one grain, which I have no doubt will very soon be got rid of. The means of leaving it off now are very different to the last, and I would strongly recommend the same to any one under similar circumstances. I make a large bottlefull, (three pints,) and measure out my dose daily, never exceeding on any account, and each time fill up the bottle with water, mixed with a little spirit of nutmeg, and by

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that means I really do not feel the loss. I have lately entirely cured a young lady who had got into the habit of taking two grains of acetate of morphia daily, and unknown to her, I entrusted the secret of diminishing the dose to her mother, to whom I gave a quart bottle of solution of acetate of morphia, four grains to the ounce, and also gave her some spirit of nutmeg, and directed her, each time she measured out her daughter's daily dose, to fill it up with spirit-and-water; by this means in three or four months she was quite cured, and was very much pleased with the result of the deception, as she was perfectly unconscious of any alteration until told.

MEDICUS.

HOMŒOPATHY AT SIDMOUTH.

WE have received a communication of considerable length, from Mr. Thomas W. Christie, surgeon, of Salcombe Mount, near Sidmouth, and one of the guardians of the poor of the parish of Salcombe Regis, but which the crowded state of our columns will not allow us to publish *in extenso*. The following, however, embraces the main points of the narrative:—Mr. Holland, Surgeon to the Honiton Union, practises homœopathically, and was noticed in THE LANCET of Oct. 1850. It appears that on the 10th of March last a pauper in the union, of the name of John Collins, was seized early in the morning with symptoms of strangulated hernia. He had long been the subject of rupture. The son of the patient went for Mr. Holland, who sent some medicine, saying it appeared that Collins was suffering from colic. He gave directions that the messenger should return and acquaint him with the progress of the case. Mr. Holland did not see the patient until about three in the afternoon, or nine hours after being sent for. It was then found necessary to operate for strangulated hernia, which operation was performed at eight P.M., or nearly fourteen hours after Mr. Holland had been sent for. The patient died on the following Thursday. In his explanation before the board of guardians, Mr. Holland stated that "he had been out during the night; his servant told him deceased had a violent pain in the bowels."

We here quote Mr. Christie's narrative:—

"Mr. Holland was here confronted by Collins, the son of the deceased, and admitted that Collins had told him that 'his father should die if he did not get relief;' that 'if he did not go, he (Collins) should go for another doctor;' that 'his father had a rupture, had great pain in the bowels, and was tumbling and rolling in the bed.' Mr. Holland then went on to say that he attended as soon as he could; he had been out during the night, was fatigued, and thought the patient only had colic. He prescribes powders, which he had used before in colic. When he went to the patient's at three o'clock was sorry to find there was a strangulated hernia, which he could not reduce, and which required an operation; it was performed, and next day the patient had no pain, and he (Mr. Holland) gave his opinion that the patient would recover; but on Wednesday he grew worse, and died on Thursday; he attributed his not recovering to the omission of enemata, which he had ordered.

Cross-examined by Mr. T. W. Christie, guardian.

"'What were the ingredients of which the powders were composed?'

"'Nux vomica' (hesitatingly).

"'In what doses?'

"'The third dilution' (hesitatingly).

"'Did the patient vomit after taking the medicine?'

"'He did.'

"'Would not any agent calculated to induce vomiting be injurious in hernia?'

"(No answer.)

"'Would not the straining attendant on the act of vomiting, mechanically, not only aggravate, but produce hernia?'

"'The third dilution of nux vomica would reduce strangulated hernia.' (Here Mr. Holland attempted to take credit to himself for having exhibited his homœopathic agent for hernia, although he had endeavoured previously to exculpate himself by saying he was not aware the man had hernia, *he thought it was only colic*.)

"'You say the man was free from pain next day?'

"'He was, and I said he would do well, and his wife thanked me for operating.'

"'Had his bowels been opened after the operation?'

"'No.'

"'I believe a patient is not considered safe after such an operation until his bowels have resumed their action?'

"(No answer.)

"'You say the man grew worse on Wednesday, and died on Thursday; now is it not more likely that the cessation of pain on Tuesday was due to the accession of mortification rather than to the subsidence of danger?'

"(No satisfactory answer.)"

Mr. Bard, Surgeon of Honiton, who assisted at the operation, was next called, and stated that he was not aware that nux vomica had been given to the patient.

Mr. Christie communicated the above facts, but more in detail, to the Poor-law Commissioners, and in his communication said:

"I respectfully submit that there are points in it, and principles involved, which imperatively demand their best consideration. This poor pauper has been permitted to sink into his grave under the futile operation of a system of quackery called 'homœopathy,' not recognised by the laws of the land; without his being visited by the medical officer, and without his knowledge or approbation (for I am informed that Mr. Holland, a homœopathist, holds his office under the anomalous conditions that he treat the poor after whatever system and prescribe whatever medicine *they* may dictate), this pauper has been subjected to the operation of a medicine, 'nux vomica,' which if it be given in quantities capable of exerting any influence on the human frame, must of necessity have still further diminished his chances of recovery, and if its infinitesimal doses be incapable of exerting any such injurious action, he has at least been left to the inevitably fatal results of a mortal disease, which nothing but prompt and scientific assistance could and might have remedied.

"Mr. Holland, and all the parties in this matter, being total strangers to me, and I having no knowledge of the matter before it was brought forward, I find myself more at liberty to treat the question on the grounds of principle alone."

Mr. Christie received a letter from the secretary of the Poor-law Commissioners, acknowledging his communication and stating that "the particulars of the case will meet with the consideration of the Board." The statement of Mr. Christie to the Poor-law Board was subsequently forwarded to the Board of Guardians of Honiton, and declared by them to be correct; at the same time the guardians wished to express an opinion that the question of the merits or demerits of homœopathy had better not have been entered into by Mr. Christie.

Mr. Christie subsequently wrote to the Poor-law Board, and complained of Mr. Holland being still allowed to be a medical officer of the Honiton Union, after repeated charges had been brought and proved against

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him. He urged that the practice of homœopathy was unjust and cruel towards the paupers, and in relation to the case of Collins, he quoted from Cooper's Dictionary" and other surgical works, to show that the treatment of strangulated hernia should be prompt and decisive, and that the absurdity of giving nux vomica in infinitesimal doses was only equalled by its fatality. The Poor-law Board observed that the case would meet with their consideration.

The following notice of a motion was made by Mr. Christie, at a meeting of the Honiton Union, held June 16th, 1851 :—

"That Mr. Holland does not possess the confidence of the Guardians of the poor of this Union, and therefore his further retention, as medical officer, is incompatible with the honour of this Board, or with the interest and well-being of the paupers.

"That this resolution is grounded upon the following reasons :—

"1. Because the Poor-law Commissioners have laid down a rule, 'That no person is eligible to the situation of Poor-law Medical Officer to any union, who is not a member of the Royal College of Surgeons and of the Apothecaries' Company;' the object of which rule being to secure for the sick poor medical treatment in accordance with the principles recognised and taught by these bodies.

"2. Because the Poor-law Commissioners have in the following letter, accompanying the dismissal of Mr. Newman, one of the Medical officers of the Wells Union, decided that homœopathy (the system of medicine [quackery] adopted by Mr. Holland in the treatment of his pauper patients) is illegal.

"'Poor-Law Commission Office, 7th February, 1843.

"'Sir,—I am directed by the Poor-law Commissioners to acknowledge the receipt of your letter of the 13th ultimo, enclosing a copy of a letter addressed to yourself by Mr. Newman, one of the medical officers of the Wells Union, in which he admits that he follows the homœopathic system of medicine in the treatment of his pauper patients. In reference thereto the Commissioners desire to state that they do not consider the homœopathic mode of treatment a system of medicine recognised by any legally constituted body in this country, and the Commissioners think that the Guardians, with whom the nomination of the persons rests, are, as trustees for the public, not justified in employing medical men who use a system of medicine not so recognised by the legal bodies presiding over the medical profession.

'I am, sir, your obedient servant,

'E. CHADWICK.'

'To Mr. J. Badcock, 'Clerk.'

"3. Because very serious aggravation of suffering is inflicted upon the poor, and the most urgent appeals are from time to time made to the board for redress, as the particulars of the sufferings and death of the late pauper, John Collins, already brought before the board, amongst others, testify.

"4. This board having by its resolution of the 21st of April, declared (by a majority of 12 to 7) the particulars of the case of Collins, submitted to the Commissioners by Mr. Christie, to be correct, cannot consistently tolerate the continuance of such evils, without leading the public to believe that they place but a very light value on the life of a pauper, and are rather the partisans of a system or an individual, than the guardians of the poor.

"5. Because Mr. Holland concealed from Mr. Burd, when called into consultation upon the pauper Collins, that he had exhibited to him nux vomica—a proceeding utterly at variance with the safety of a patient, or the honorable practice of a profession.

"6. Because Mr. Holland endeavoured to shield himself from censure by stating to this board that the nurse failed to exhibit enemata to the pauper Collins, as ordered; whereas it now appears that the nurse did exhibit no fewer than four such enemata.

"7. Because Mr. Holland has, in a letter to the Poor-law Board, dated 1850, stigmatized the ordinary practice of medicine (recognised by the legal bodies presiding over the medical profession in this country, and laid down by the laws of the land for his guidance in the treatment of his pauper patients) as being 'positively murderous in its results:' and yet offers to treat the paupers under his care according to this (*in his estimation*) *positively murderous system* if they, the poor, choose it, rather than resign his situation. This board cannot therefore consistently retain Mr. Holland as medical officer, without procuring for the board a low standard of moral conduct, or without identifying themselves, as guardians, with what they believe to be a compromise of principle, and ought therefore to request the Poor-law Commissioners to remove him from the office."

This motion was rejected.

At a meeting of the guardians on the 30th of June, the following motion was carried by the *friends* of homœopathy :—

"Resolved, that this board, being satisfied that the sick poor of this Union have not always any choice as to whether they should be treated homœopathically or allopathically, a letter be addressed to the Poor-law Board, requesting that they will suggest a plan, under which such choice on the part of the poor may be thoroughly secured; or, in the event of the same being considered *impracticable* by the commissioners, *as it is by the guardians*, that *the allopathic system of practice alone* may for the present be pursued."

Such is the present state of matters in the Honiton Union respecting the treatment of the poor confided to the care of one of the medical officers.

HOMŒOPATHY.—GLOUCESTERSHIRE MEDICAL ASSOCIATION.

THE anniversary meeting of the Association took place at the George Inn, Cheltenham, on the 10th ultimo. After the usual preliminary business had been gone through, Dr. EVANS having been appointed chairman for the year ensuing, and a vote of thanks having been passed to Mr. STOKES, the retiring president.

Dr. BROOKES rose and said—It is with feelings of astonishment and regret I am compelled to bring before the notice of this meeting a subject which is most painful to myself, having been so long associated, in this society, with many of the gentlemen upon whom I must now throw some censure. I say astonishment, for when I recollect that at the quarterly meeting of this society held in January, 1851, more than six months since, I casually mentioned the subject, I was then told by the officials I was out of order in bringing it forward at that meeting; however, I think it was sufficiently known for our council to have noticed it, whose duty it is to look after the honour, welfare, and interest of this Society; yet I find, in their Report for the year just ended, they have not even so much as made one passing remark upon it, and by that means they have thrown the onus on the shoulders of the members. I, for one, will never shrink from upholding the dignity and honour of my profession; and when I find gentlemen gaining admission into a Society like a wolf in sheep's clothing, I will have an explanation from them, although it may not perhaps meet the views of our officials to do so, from feelings of delicacy, or not wishing to offend

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some of our country medical friends. When I read the following words of our Report—viz., "to look after the interest and internal regulations of the profession," &c., and also again look to the rules and objects of the Society, as laid down in this printed document for our guidance, I cannot but think the council have committed a great error, if not a dereliction of duty. I find in the *Medical Directory* for 1851, the name of Adrian Stokes, M.D., Wickwar, in one portion amongst the regular practitioners, and in another, under the head of "Practitioners who dissent from the Established Doctrines of the Medical Profession, practising respectively Homœopathy and Hydropathy." I observe under "Homœopathy," again the name of Adrian Stokes, M.D., Wickwar. I must now call upon our secretary to state whether this is the Dr. Adrian Stokes, Wickwar, one of the members of this Association; and if so, how it is six months have been allowed to elapse without the council noticing so gross a thing, and not calling upon that gentleman for an explanation or resignation! I feel I cannot allow myself to continue a member of an Association, where a gentleman practising such a system is allowed to remain on its list of members. I would not meet him in the sick-room—I will not do so at the meetings of this Society, or even at our more jovial dinners. Can we, as honest medical practitioners, do so? If we are honest, (which I trust we are,) we must view their doctrines as wrong, not to make use of any harsher and stronger language; and it is our duty as a profession to unite and watch closely its interest and honour. Perhaps Mr. Secretary will kindly inform us whether it is the same Dr. Stokes whose name appears in both lists.

Mr. Wilton.—That is the fact, without doubt.

Dr. Brookes.—I shall now, seeing Dr. Adrian Stokes in the room, propose the following resolution:—"That Dr. Adrian Stokes be requested to explain to the Society how it is his name appears in the 'Medical Directory' as an homœopathic practitioner? and should that explanation not be deemed satisfactory, his name be erased from the list of members of the Gloucestershire Medical Association."

Mr. Wilton.—As an officer, I cannot tell why the Association has not taken up this subject. There is no particular rule which calls on the council to enter on the question of homœopathy, and I am unable to give any information. I do not see how, in my office of secretary, I can possibly know anything about it. It is not a thing for me to answer. I have a communication from Dr. Stokes. (Mr. Wilton inquired of Dr. Stokes whether he should read it then.)

Dr. Stokes said he would explain.

The President.—I do not think this is the proper way to have brought if forward. I think all matters should be done in order; I think that so important a measure as the expulsion of one of our members is a thing which required notice. As to Dr. Brookes' saying that notice has been given, it is out of the question.

Dr. Brookes.—I brought it forward, and I said I should bring it forward at our annual meeting.

Mr. Wilton.—I must state that there can be no official notice by any person communicating merely at a public table. If Dr. Brookes had intended to bring this forward he should have given me notice, and of course I should have circulated the notice. I should infer, from the manner in which Dr. Brookes has made his remarks, that he thinks I should have circulated this notice.

Dr. Brookes.—There is no notice required by your rules. If you want to get rid of this subject by a side-door——

Dr. Wright.—I think Dr. Brookes is entirely out of order. It is too much for Dr. Brookes to charge the council with a neglect of duty. The only rule that touches our Society is, that every legally qualified medical practitioner shall be eligible to become a member of the Society. We are not in a position to enter into the question whether he is an allopath or a homœopath. But if the question whether that gentleman ought or ought not to continue a member of the Association is to be discussed, it ought to emanate with the Association, not with the council. The council does not form an *imperium in imperio*. I should be very sorry to shirk this question on any technical informality. I heard that a verbal notice was given. No notice is necessary. It would have been more courteous to have sent a notice to Dr. Adrian Stokes. I think it would be better we should proceed at once to the subject.

The President.—I think I have a right to make a remark on Dr. Brookes's speech, which he has brought ready cut and dried, and read. He has made use of the expression "gentlemen getting into the society in sheep's clothing, ought to be no protection." I mean to say that that part of his speech I regard as objectionable, because it must allude to somebody having got admission to this Society who ought not to have been admitted. That meaning I consider attaches to this. There is only one individual who practises homœopathy.

Dr. Brookes.—I have heard there are two.

The President.—With regard to my nephew, when he was admitted he had not made up his mind to practise homœopathy: he did not enter the Society "in sheep's clothing." With regard to whether he shall continue as a member, that is another question.

Dr. Adrian Stokes.—I am the Dr. Stokes who was elected a member of the Society. At that time I was practising the ordinary system of medicine. Since then, I have seen occasion to modify my views, and I have adopted, with very great satisfaction to myself, and benefit to my patients, the system of homœopathy.

Dr. Brookes.—I do not think we have any right to have homœopathy broached.

Dr. Wright.—I think we are out of order.

Dr. Stokes.—I know very well the animus of Dr. Brookes and The Lancet. As to the remarks, I shall manage to survive them; they will not crush me. Every man belonging to the medical profession knows there are certain methods of cure which may be explained upon the principle of homœopathy. I do not doubt that Dr. Brookes would use mercury in a case of dysentery. Explain these remedies in whatever way we like, the principle of homœopathy, "similia similibus curantur," is applicable. I think the application of that principle to the healing art generally——

Dr. Eyes.—I do not think that we can hear a lecture on homœopathy.

Dr. Brookes.—The question is, whether individuals who hold these views can sit down with gentlemen who hold the other views? I would not sit in any room with, nor meet any person, as a medical man, who practises homœopathy. I will have this discussion conducted properly.

Mr. Wilton.—Your resolution combines two subjects.

Dr. Brookes.—I will put them in two.

Dr. Wright.—Dr. Stokes has explained that when he joined the Association he held opinions different to what he does now; he has changed them since, from conviction that he is right.

Dr. Brookes.—I, at the meeting at Gloucester, brought this subject casually before the Society.

The President.—Casually, not regularly.

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Dr. Brookes.—I named it publicly there, that if there was a gentleman practising homœopathy, he ought to resign. I am sorry if I have said anything offensive to Mr. Wilton. I consulted with my friends whether it was wise to write to Dr. Adrian Stokes. Had not Dr. Adrian Stokes been in the room, I should have merely requested that a letter be written to him. I should then have allowed it to rest over; but the matter has been known to two or three members, and the report makes no allusion to it. They allow a gentleman to come to this meeting—to come to this dinner, an avowed homœopath, and yet, had I not brought it forward, it would have gone on for another year, and I do not know how much longer.

Dr. Stokes.—And what harm!

Dr. Brookes.—And Dr. Stokes asks "What harm?" Either you are practising your profession dishonestly, or I. If you believe in homœopathic practice, I must be a rogue.

The President.—I deny it.

Dr. Brookes.—The moment Dr. Stokes commenced to practice as an homœopathist, if he had been honest and fair to the members of the Gloucestershire Medical Association, he should have said, "I have gone from the regular system of practice;" if he has that honesty of purpose, he will not go out of this room a member of the Gloucestershire Association.

The President.—Dr. Brookes has impugned the council of neglect of duty. Now, I mean to say the council have taken no notice of the subject he casually brought forward and talked over. It did appear to the council it was not necessary to take any steps; it did appear they did not think with him or feel with him.

Dr. Brookes.—I am sorry the council are such a set of men that they do not feel with me on this point.

Dr. Wright.—I say, as a member of the Association, that Dr. Brookes has made a wrong charge. The council is only empowered to initiate proceedings; the fundamental rules of our society do not contemplate or constitute the council as an *imperium in imperio*, to inquire into the mode of practice of the members; it lies with the members of the Association. If I had been the doctor I should have sent in my resignation, fearing that some individual like Dr. Brookes should get up and make such observations. The council had no power to do this; it would have been impertinence on the part of the council to do anything of the sort. Although no notice is necessary, out of courtesy Dr. Brookes ought to have given notice.

Dr. Eyes.—I fear, from what the President has said, it will be thought it has been discussed in the council. It has never been talked of or discussed.

Dr. Brookes.—Dr. Wright has said it is no business of the council.

Dr. Wright.—There are the duties.

Dr. Brookes.—There are no duties for the council to perform, if this is not their duty. I decline, *in toto*, having any courtesy, anything like meeting with any gentleman who practices homœopathy. I came here independently. I say that as regards courtesy, I fling it away. I have no courtesy with homœopathic practitioners, and I expect none.

Mr. Wilton.—Some time since, I asked Dr. Stokes the question whether he should like me to read a letter he had sent to me then. Dr. Stokes said he would explain. This is dated March 28th, 1851. Since that time, there has been a meeting of the Association at which I was not present. The resignation remained in my hand for a future occasion. (Mr. Wilton then read the letter from Dr. Adrian Stokes, tendering his resignation as member of the Association.)

The President.—We know that was not produced, and there were motives for it. Every man may have his own idea on therapeutics: if he has passed through the education and gradations, there is no reason why he should not be a member. If an homœopathic doctor ought not to sit down with Dr. Brookes—Dr. Brookes ought not to sit down with him; it is just as broad as long. I don't see why men should quarrel about it. I think they ought to give way to each other.

Dr. Brookes.—Am I to understand that is a resignation?

Dr. Eyes.—I beg leave to move that Dr. Stokes's resignation be accepted.

Dr. Brookes seconded this proposition, which was carried.

Medical Facts, News, Items, &c.

The Sanitary Conference at Paris.—The first meeting of the Sanitary Conference took place here on Wednesday in the hotel of the Minister of Foreign Affairs. It was attended by delegates from Great Britain, France, Austria, Spain, Sardinia, and Greece. The delegates were called together by M. David, Minister Plenipotentiary and Delegate from France, who, in a brief address, welcomed the delegates to Paris, and expressed a hope that their deliberations would be of great service to the interests of the several states which they represented. The first proceeding was the election of a president of the conference, when M. David was chosen unanimously. This was the principal business of the meeting, which was adjourned for several days to allow time for the arrival of delegates who are expected from Russia, Turkey, Tuscany, the Roman States, the two Sicilies, Portugal, and others.

British Medical Fund.—The first annual general meeting of the members of this Society was held on Wednesday, the 30th ultimo, at the offices, No. 28, Bloomsbury-square. Dr. Forbes having taken the chair, briefly addressed the meeting, after which the Secretary read the report, detailing the operations of the Society since July, 1850, from which it appeared, that since that period many members had been added to the Society, and that in other respects considerable progress had been made. The Directors, in conclusion, stated that they confidently relied on the willing exertions of their brethren to aid them in bringing so valuable and necessary an institution into a state of thorough efficiency. The Secretary having then read a statement of the finances of the Society, several resolutions were passed, approving and adopting the report, and expressive of thanks to the directors for their past labours in behalf of the Society. A vote of thanks having been accorded to Dr. Forbes for the interest he had taken in the Society, and for his able conduct in the chair, the meeting broke up.

Feigned Insanity.—The *Medical Gazette* of Lombardy gives an account of very skilful deception practised by a shepherd, seventeen years of age, who had violated a little girl of seven. He imitated an imbecile state of mind with so much accuracy, that Drs. Windler and Linck, appointed to report upon him, were thoroughly deceived. When the lad was put upon his trial, he played his part so well, that upon medical testimony he was acquitted. Soon after his liberation he resumed his usual deportment, and confessed that he had practised the deception upon the advice of a fellow prisoner. A writer in the *Bulletin de Thérapeutique* states, with much reason, that rendering the prisoner insensible with ether might have excited him to talk, and disclose his scheme.

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THE LANCET.

A Journal of Medical, Surgical, and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

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Clinical Lectures
ON
ACUTE CAPILLARY BRONCHITIS,
Delivered at St. Thomas's Hospital,

BY THOMAS B. PEACOCK, M.D.,
ASSISTANT-PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I propose, on the present occasion, to bring under your notice two cases I have now in the hospital, and which present examples, not only of a somewhat uncommon form of disease, but also of a combination which is certainly not of frequent occurrence. I allude to two cases in which acute bronchitis of the smaller tubes, or, as it is commonly called, acute capillary bronchitis, occurred during attacks of acute rheumatism.

The first of these cases is that of Catherine F——, a servant, eighteen years of age, who was admitted into Ann's ward on the 14th of December. She then stated that she had been ill three days, and presented symptoms of fever, with much general soreness, and pains in the limbs and back. On or about the 20th, a few small elevated spots, of a rose colour, and which faded on pressure, made their appearance on the chest and abdomen, and these sufficiently distinguished the case as one of typhoid fever. She was convalescent on the 28th, and would have been discharged on the 4th of January, had she not presented some return of febrile symptoms on the 3rd. I saw her on the 6th: she was then labouring under considerable fever; the pulse was 100, and sharp; the tongue covered with a thick whitish fur, and with the papillæ red; there was much jactitation and restlessness; she was breathing rapidly, and with a moan, and there was some tenderness of the abdomen; auscultation and percussion detected no signs of disease in the lungs or heart. She was directed to take two grains of calomel and one of opium, immediately, and again at bed-time, and to have a mustard poultice applied to the abdomen.

The following notes were taken on the 7th of January: She has passed a restless night, and is suffering from pain in the left side of the chest, referred chiefly a little below the mamma, and in this part there is some tenderness on pressure. There is much headache, with jactitation and restlessness, and pain in the limbs and back, especially on movement; the pulse is 116, feeble and compressible; the tongue dry, and thickly coated with a whitish fur, and the papillæ red; the skin is dry, and she complains much of thirst; the respiration is hurried, 44 in the minute; she has a slight cough, and expectorates a little glairy mucus. On auscultation the inspiration is heard of a harsh character, especially in the dorsal regions, and on the right side, but the resonance on percussion is not impaired. She was directed to be cupped between the shoulders to eight ounces, to take two grains of calomel and half a grain of opium, twice daily; and one quarter of a grain of the potassio-tartrate of antimony, ten minims of tincture of colchicum, half a drachm of spirit of nitric ether, and twenty minims of the compound tincture of camphor every three hours.

Jan. 8th.—Pulse 136, sharp and vibratory; tongue covered with a thick, white fur, and the papillæ and edges red. The respirations are 32 in the minute; she has some cough, and expectorates a small quantity of sputum, partly glairy and adhesive, and partly in the form of masses composed of separate pellets, studded with dark spots. The respiration, as heard over the whole of the posterior part of the chest, is dry and harsh, though without any rhonchus. She complains of pain in the back and limbs, and there is some twitching of the muscles of the arms. The abdomen is less tender, but somewhat inflated. To continue the calomel and opium, with the antimonial mixture.

8th.—Pulse 84, quiet and compressible; tongue with the papillæ and edges red, but less coated than before. There is less restlessness and twitching of the limbs, the pain in the back is much relieved, and she is more capable of moving herself. The respirations are 32 in the minute, and the inspiratory sound is less harsh than before, but at the lower part of the left dorsal region it is almost crepitant. In front, the respiration is somewhat harsher on the left than on the right side. She is still expectorating a small quantity of matter

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similar to that described yesterday. The gums are a little spongy. The mixture has produced some sickness and vomiting, and the bowels have been twice relieved. The calomel and opium to be taken only at night, and the dose of antimony to be reduced to one-eighth of a grain.

11th.—Pulse 80, of better volume and strength; tongue cleaner, though still with the sides and papillæ red; sputum very scanty; respiration full and free, and without any morbid sound. She still moves with difficulty, and complains of the general soreness, and pains in the back and limbs; as these symptoms increased yesterday, she was directed to have the dose of colchicum increased to fifteen minims. She has had no return of the sickness, and the bowels have been only once relieved. To omit the pills, and continue the antimonial mixture.

From this time, she continued to improve; her pulse became quiet, the tongue clean, and the pulmonary and rheumatic symptoms subsided; but on the 16th of January she was taken worse; the pulse rose to 120; the tongue again acquired a coating of thick, white fur; the breathing became short and hurried; the cough recurred; and she expectorated matter of the same character as before. The application of a blister between the shoulders, together with the exhibition of a dose of two grains of calomel, with one of opium, in conjunction with the antimonial medicine, however, afforded her relief; and on the 20th of January all symptoms of the disease had entirely disappeared, and she will be discharged on Tuesday next, the 11th of February.

In this case you will observe that the patient, when convalescent from an attack typhoid fever, became the subject of acute rheumatism, combined with symptoms of acute pulmonary inflammation; and the short and rapid breathing, the general harshness of the respiratory sounds, especially in the lower dorsal regions, unattended by dulness on percussion or other decided physical signs, and the peculiar character of the matter expectorated, sufficiently indicated the case to be one of commencing capillary bronchitis. The sputum can, however, only be regarded as characteristic of acute capillary bronchitis, so far as to its being in the form of masses composed of smaller pellets aggregated together. Black sputa are certainly not often seen in acute bronchitis, though when present in cases of chronic bronchitis, and in the form of subacute inflammation which attends the deposition and softening of tubercle, they always indicate an affection of the smaller bronchial tubes. Microscopic examination of the matters expectorated in this and many other cases, has uniformly shown the dark colour to depend on granular material contained in the epithelium cells, and consequently that it is an excretion from the blood, not carbonaceous matter, which has been inhaled.

The second case is that of Mary J———, also a servant, twenty-six years of age, who was admitted into the hospital on the 11th of January. The day after her admission, the following notes were taken by Mr. Lankester:—She stated that she has enjoyed good health until five days ago, when she was suddenly seized with soreness and gathering in the throat, tenderness and stiffness in the left knee and hip, and general febrile symptoms. Since that time she had been getting worse, all the limbs becoming more affected, and latterly her breathing being uneasy. She is now complaining of pain in nearly all her joints and in the lower part of the back. The ankles and knees of both legs are somewhat swollen and tender; the shoulders also are tender, but the elbows are not materially affected. The skin is warm and moist; the face rather flushed; the tongue moist, with a dirty white fur towards the sides, and elsewhere morbidly red. The pulse is 110, and sharp but compressible. She complains much of thirst; and the bowels have been several times moved by a draught which she took early this morning. She has much dyspnœa, and the respirations are rapid, 40 in the minute. On drawing a full inspiration, she experiences pain, chiefly in the left side of the chest. Her voice is very weak and husky. The heart sounds are natural, but crepitation is heard over the whole of the front of the chest.

I saw her for the first time on the 13th, and the following notes were then taken:—She is much prostrated, and lies in a constrained position, in consequence of the pain and tenderness in the back. There is now no appearance of tumefaction about the knees; but the left ankle is tender on pressure, and the right elbow and wrist are swollen and tender. The face is much flushed; the tongue morbidly red at the centre and edges, and covered with a thick white fur at the sides; the pulse is 112, and sharp, but readily compressible. She has a frequent short cough, but does not expectorate with it. There is dulness on percussion in both dorsal regions, most marked and extensive on the left, and distinct bronchial respiration is there heard, more especially on the left side; a loud souffle is audible with the cough at the roots of the lungs, and a more or less fine crepitant rhonchus is heard in other parts of the chest, but chiefly in the posterior and inferior regions. The heart sounds are natural.

She was directed to be cupped between the shoulders to eight ounces; to take two grains of calomel, and one quarter of a grain of opium, three times a day; and one eighth of a grain of the potassio-tartrate of antimony, half a drachm of the spirit of nitric ether, half a drachm of compound tincture of camphor, and five minims of tincture of colchicum, every three hours.

Jan. 14th.—She has been cupped, and has taken two pills, and four doses of the mixture. She has not been sick, but the bowels have been twice relieved. The tongue is morbidly red and glazed, and studded in places with small patches of white fur. The pulse is 120, and tolerably firm. The wrists are much swollen, and she complains of considerable pain in the back. The respirations are 40 in the minute, and fuller and freer than before. The sputum is very scanty, in viscid masses of an opaque greenish-yellow colour, con-

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taining a few small air bubbles. The dulness on percussion in the dorsal regions is very marked, and on the left side it has extended upwards. Loud bronchial respiration is heard at the lower angle of the left scapula, and at the root of the lung. On the right side, bronchial respiration is chiefly heard at the root of the lung, and muco-crepitating sounds are heard in all other parts of the chest. The prostration of strength is somewhat less. She reposes on her back, with the head and shoulders raised, but requires to be placed upright in bed at intervals.

15th.—Pulse 120, sharp and vibratory; tongue very red, dry, and glazed. She complains of pain in the right side. The wrists are less tumid, and she has less pain in the knees and ankles. Respiration 44 in the minute, somewhat laborious. The left side of the chest posteriorly sounds entirely dull on percussion; above, crepitant and sub-crepitant rhonchi are heard; towards the root of the lung, and at the lower angle of the scapula, there is loud bronchial respiration, and a distinct ringing souffle with the cough. On the right side some bronchial respiration is heard towards the root of the lung, and elsewhere respiration is attended with more or less marked crepitation. She has a slight cough, and expectorates a little opaque viscid mucus. The gums are becoming affected. The mixture has never produced sickness, but the bowels have been three or four times acted upon last night. To take the calomel and opium four times daily; to omit the mixture, and take in its stead every two hours a draught containing five grains of the sesquicarbonate of ammonia, ten minims of tincture of colchicum, and ten minims of ipecacuanha wine, in one ounce of decoction of senega. To have a blister applied between the shoulders.

16th.—Tongue more moist, but still morbidly red, and covered in places with patches of white fur; pulse 120, and more quiet; she looks much less depressed, and the rheumatic symptoms are subsiding; the sputum is more copious, and less viscid; respirations 40 in the minute. Respiration can be heard down the whole of the posterior part of the right side of the chest, though attended with some sub-crepitation. At the upper part of the left side crepitation is heard, and at the root of the lung and inferior angle of the scapula there is the same loud bronchial respiration as before; the voice is extremely feeble and husky, and the fauces are red and œdematous. There is a copious eruption of sudamina over the neck and chest, and, to a less degree, on the upper part of the abdomen. The gums are more spongy; the bowels have been twice relieved since yesterday.

18th.—Yesterday she was better, and the mercurial action on the gums being more decided, the pills were directed to be taken only twice daily. The draught, to which half a drachm of compound tincture of camphor had been added, was given every four hours. To-day she is not so well, and the prostration of strength appears greater; pulse 120, and vibratory; respirations 44, and hurried. At the right side of the chest the sub-crepitation is chiefly confined to the lower dorsal region; but on the left side, bronchial respiration and the bronchial souffle are still heard at the root of the lung, and elsewhere there is much crepitant and mucous rhonchus. The face is more flushed than before, the tongue dry, morbidly red, glazed, and chapped. Throughout her illness she has preferred to be highly raised in bed, or to sit upright; and, when in the latter position, has been much easier; but, in consequence of having been allowed to lie too low in bed, she has not expectorated at all this morning, and her breathing is very laborious; the voice is very husky, and the throat is relaxed and red. After raising her, and examining the throat, she coughed severely, and then expectorated a mass, apparently of false membrane, having several specks of blood on its surface. The bowels have been twice relieved to-day; the gums are decidedly affected; the sudamina still out. To omit the pill, and continue the draught every three hours, increasing the sesquicarbonate of ammonia to eight grains.

20th.—Tongue morbidly red, somewhat glazed; pulse 110 and quiet. After the visit on the 18th and yesterday, she expectorated a considerable quantity of glairy, adhesive mucus of a yellowish colour. She now complains that she cannot lie down, but her breathing is decidedly quieter than before; respirations 40 in the minute, fuller than before. Respiration posteriorly on the right side is much freer, though there is still some crepitation, more especially towards the base of the dorsal region. On the left side mucous and crepitant rhonchi are heard in all parts, and bronchial respiration towards the root of the lung. The bowels have been twice acted on. The wrist and hand are still swollen, but the rheumatic symptoms are less. She took, last night, a pill containing two grains of calomel, four grains of Dover's powder, and four grains of extract of hyoscyamus, and has passed a better night. To repeat the pills; a blister to be applied to the chest.

22nd.—Pulse 108; on the right side respiration is attended with some crepitation, at the base of the dorsal region, and elsewhere the expiratory sound is prolonged. Bronchial respiration is still heard at the root of the left lung, with mucous and crepitating sounds in the lower dorsal regions; above, the respiration is clearer. Her appearance is much improved; her voice is still husky, though stronger than before. The rheumatic symptoms are nearly gone; the sudamina are still perceived on the neck. She expectorates muco-purulent matter in the form of masses, but in less quantity than before. The bowels have been frequently acted upon, and yesterday and to-day she has been taking the compound chalk mixture, with catechu, and pills of acetate of lead and opium, three times daily. To omit the colchicum from the mixture, and substitute the infusion of cascarilla for the senega.

27th.—She has continued steadily to improve since the last date, and is now much stronger and better. The tongue is clean and natural. The pulse is of good volume, 100. Respiration 36,

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full and free. On auscultation, respiration is heard naturally on the right side, except that there is a very distinct and prolonged expiratory sound. On the left side, posteriorly, respiration is attended with large crepitation low down, and towards the root of the lung, but the bronchial respiration is no longer audible, and the souffle can scarcely be detected with the cough. The sound, on percussion, is somewhat dull over the whole of the chest posteriorly, but to a greater degree on the left side, and at the lower part. In front respiration is good, and percussion yields a clear sound, but less so on the left than on the right side. She now only complains of stiffness in the back and limbs. The cough troubles her much less, and chiefly when she lies down, and she does not expectorate. The eruption has entirely disappeared; the diarrhœa was checked on the 24th, and the bowels are now relieved twice or three times daily. Since the 25th, she has taken four grains of Dover's powder, and four of extract of hyoscyamus, each night. To omit the mixture, and take two grains of quinine, and one of sulphate of iron, with half a drachm of compound tincture of camphor, three times daily. From this time she has continued steadily to gain strength and is now quite convalescent.

The case which I have now detailed to you, from the more extended notes taken at the time, was much more serious than the former, the pulmonary affection and the rheumatic symptoms being both more intense, and the disease having attained a more advanced stage before it came under treatment. The great amount of difficulty of breathing, the flushed countenance, and the prostration of strength, which were observed at an early period of the attack, together with the muco-crepitating sounds diffused to a greater or less degree over all parts of the chest, sufficiently characterize the case as one of acute capillary bronchitis in the second stage. In addition, however, to the ordinary signs of that affection, there existed dulness on percussion, together with loud bronchial respiration in the dorsal regions, and a souffle heard with the cough at the root of the lungs, thus affording evidences of the existence of extensive consolidation of the pulmonary tissue. This consolidation might depend either on the supervention of pneumonia causing exudation into the substance of the lungs, or on collapse of the pulmonary cells, in consequence of the amount of obstruction existing in the smaller bronchial tubes. I am, however, induced to refer it to the latter cause, from the circumstance of extensive bronchitis being present at the time of the patient's admission into the hospital, and probably before the occurrence of consolidation, and from the character of the sputum throughout having continued that of bronchitis, and not, as would have been the case had pneumonia supervened, having been composed of a mixture of the sputa of pneumonia and bronchitis. This inference is confirmed by the subsequent progress of the case, and I therefore feel little doubt that the consolidation depended on collapse of the lung, a change which, though it is of common occurrence to a slight degree in cases of capillary bronchitis, is not frequently found so extensive as it most probably was in the present instance.

The form of pulmonary inflammation of which these cases afford well characterized examples—the acute capillary bronchitis—is one which, though far from common as a sporadic affection, is not unfrequently seen as a complication of various epidemic diseases, such as influenza, the eruptive fevers, typhoid, &c., and when it occurs is always of serious import. I shall therefore take the present opportunity of giving you a general outline of its chief characteristics, and shall reserve, to the conclusion of the next lecture, the further remarks which I have to offer on the two cases which we have had under our notice.

LECTURE II.

Symptoms.—It occasionally happens that, after having suffered from an ordinary catarrh for a few days, a patient is suddenly seized with acute febrile disturbance, together with difficult and hurried breathing, sense of constriction across the chest, and cough, giving the impression, as in the case of F——, just described, that he is becoming the subject of acute pulmonary inflammation; and yet, on careful examination of the chest, no decided evidences of disease may be detected. Perhaps there may be some harshness of the respiratory sounds, more especially on listening at one or both lower dorsal regions, or slight sibilant rhonchus, on forced inspiration, or general feebleness of respiration; but, in many cases, careful examination will elicit no marked physical sign.

If appropriate treatment be at once had recourse to, these symptoms may wholly subside at the end of a day or two; on the contrary, however, if they be not at once subdued, evidences of serious pulmonary disease will soon develop themselves. The febrile symptoms will become more marked, the pulse will be quick and vibratory, the tongue moist, but covered with a thick whitybrown fur, the respiration will be more hurried and difficult, the sense of constriction will increase, the cough become frequent, and be attended by a scanty, pale, glairy expectoration. On listening to the chest there will now be heard, at the lower dorsal region of one or both lungs, a slight crepitant rhonchus, generally with some sibilant sounds in other parts of the lungs, and this crepitation will rapidly diffuse itself over other parts of the chest. It will extend to the upper dorsal regions, and then to the lower parts of the chest laterally and anteriorly, while it will acquire a coarser or more subcrepitant character in the parts where it first appeared. At the same time the chest, so far from yielding a dull sound on percussion, will retain its natural clearness or will become abnormally resonant. The respirations will be shorter and more rapid, the face deeply flushed or livid, the patient will become much prostrated, and will be no longer able to lie in the

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recumbent position, but will be compelled to be much raised or placed upright in bed. At a still later period the crepitant rhonchus will be audible in all parts of the chest, and with the expiratory as well as the inspiratory acts, and loud gurgling sounds will be heard at the root of the lungs, and in the vicinity of the larger bronchial tubes. The chest will now be morbidly resonant on percussion, either entirely or in part, the resonance being most marked at the upper and anterior regions, while the lower and posterior may yield a more or less dull sound. The face will be flushed and tumid, the lips purple, and the extremities livid and cool. The cough will be frequent, but not generally attended with pain, and the expectoration will consist of viscid, whitish-coloured, muco-purulent masses, which, on close examination, will be found composed of small pellets, aggregated together and free from air. Sometimes the sputum will be raised in considerable quantities, but, with the progress of the disease, and the declining strength of the patient, it will become scanty, or altogether incapable of being evacuated. The pulse will be quick and feeble, varying from 130 to 150; the respirations will be short and rapid, from 40 to 60 in the minute, and both the inspiratory and expiratory acts will be performed with great effort. The sense of suffocation will become extreme, and the patient will die asphyxiated in from nine to twelve days from the commencement of the symptoms.

This, you will perceive, presents a picture of the disease in its most unfavourable form, such as we happily only see in persons who have not been subjected to treatment in the earlier stages, or in those who labour under other serious disease. In the cases which terminate in recovery, the amendment is marked by the respiration becoming freer and less rapid, so that the patient requires to be less constantly propped up in bed; the lividity of the face decreases, the pulse becomes slower and stronger, the cough less troublesome, and the sputum is more readily expectorated, and assumes a diffluent muco-purulent character. The abnormal resonance and dulness of the chest gradually subside, the crepitation ceases to be heard in those parts where it had last become audible, disappearing first in the front and upper parts of the chest, then in the lower regions anteriorly and laterally, and lastly in the dorsal regions. A long period, however, elapses before the physical signs entirely disappear, and when the general symptoms are relieved, some degree of crepitant rhonchus will generally still be heard at the lower part of one or both dorsal regions, and after the subsidence of other evidences of disease, there can usually be detected a general want of clearness on percussion in all parts of the chest, and the inspiratory sound is found somewhat harsher or feebler, and the expiratory sound louder and more prolonged, than natural; these signs being the more persistent according to the extent to which the disease has been allowed to proceed before appropriate treatment is had recourse to, so that in some cases permanent emphysema of the lungs and dilatation of the smaller bronchial tubes, giving rise to symptoms of asthma, apparently result from attacks of acute capillary bronchitis which had been neglected in the earlier stage.

Morbid Appearances.—In the cases of acute capillary bronchitis which prove fatal, the condition of the substance of the lungs and of the bronchial tubes is precisely such as the physical signs observed during life would lead us to expect. The pulmonary cells, over a large portion of the lung, are completely and equably inflated, so that when the sternum is raised, the lungs not unfrequently protrude from the cavity of the chest. Some portions, however, particularly the posterior and inferior parts and the edges of the lungs, are usually found in a state of consolidation, depressed below the level of the adjacent inflated portions, and of a deep purple colour. The consolidation will be found to be lobular, being bounded by abrupt and angular margins formed by the interlobular cellular septa, and may involve either a few isolated lobules, or a larger or smaller portion of one or both lungs. The bronchial tubes will contain much secretion, and their lining membrane will be reddened, roughened, and thicker and softer than natural; the amount of secretion in the tubes, and the intensity of the change in the mucous membranes, increasing as we advance towards the ultimate ramifications of the bronchi. Some of the smaller tubes, and especially those contained in the portions of consolidated lung, are entirely filled with secretion, so that when a secretion is made through one of these spots, small drops of viscid white matter are seen to exude from the cut extremities of the bronchi. The matter contained in the tubes of larger size more nearly resembles ordinary muco-purulent fluid, but in those of smaller size, it is whitish-coloured and very viscid, and occasionally almost membranous; and in those contained in the consolidated lobules it is more or less distinctly purulent. The consolidated parts vary considerably in appearance and firmness; some are of an uniform purple colour, and are solid, and give a peculiar knotty feeling when the lung is handled; others are of a yellowish colour, and are soft, so as readily to break down under pressure; and in yet others the tissue is entirely diffluent, or small cavities are formed, either by the dilatation or ulceration of the smaller bronchial tubes, or by the suppuration or breaking down of the consolidated pulmonary tissue in which they are embedded.

When my attention was more particularly attracted to the morbid anatomy of the acute capillary bronchitis, during the epidemic of influenza, I adopted, as the explanation of the two opposite conditions of the lung which were found after death, the views then generally received. The inflation I referred to the air being drawn into the cells with the inspiratory act, and retained there in consequence of the act of expiration being too feeble to force it out through the obstructed bronchial tubes; and the consolidation I regarded as the result of inflammatory exudation into the

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substance of the lung, and applied to it the common term of "lobular pneumonia."

These views, however, I am now disposed to regard as erroneous. The inflation of the lung cannot depend on the cause assigned, because, so far from the act of inspiration being the most powerful of the two, it is really the feebler, and also because the inflation is developed, not in those parts of the lung in which the obstruction is most considerable, but, on the contrary, in the portions least affected. The consolidation also cannot depend on exudation into the cells, because the condensed parts can in some cases be entirely inflated after death.

The profession have for some time been familiar with the collapsed condition of the lung which is found in new-born children, and to which the term "atelektasis pulmonum" has been applied, and more recently the same change has been described in a very able paper by Dr. Gairdner, of Edinburgh, as a not unfrequent result of bronchitis. That the lobular condensation of the lungs, in these cases, is dependent on collapse of the cells, may be frequently demonstrated by the ready inflatability of the condensed parts; while, in other cases, the extension of the inflammation from the bronchial tubes to the collapsed tissue around, and the various changes which result, afford a sufficient explanation why the test of inflation should no longer be applicable.

Adopting, therefore, the views of Dr. Gairdner, the two conditions must, I believe, be ascribed to the different degrees of obstruction in different parts of the lungs. In those parts where the swelling of the bronchial mucous membrane and the secretion in the tubes exist to the greatest extent, the air may be wholly prevented from entering into the pulmonary cells during the act of inspiration; while, from the peculiar arrangement of the bronchial apparatus, and the greater power of the expiratory act, that which has already entered may be pressed out, and thus the cells will become entirely empty and collapsed. In those portions of the lungs, on the contrary, where the bronchial obstruction is less, the air will enter with more force, and will thus give rise to the extensive and equable inflation of the cells which is observed; and if any portion of the pulmonary tissue give way, from over-distention, true emphysema, either vesicular or inter-lobular, may also be produced.

Diagnosis.—From the history which has been given of the symptoms during life, and the morbid changes which are detected in the lungs after death, you will be aware that this form of inflammation of the lung is liable to be confounded with inflammation of the larger bronchi on the one hand, and of the cells on the other. In the early stages of the disease, before the physical signs have been developed—when, indeed, the dyspnœa which exists probably mainly depends on spasm of the bronchial tubes, a precise diagnosis can hardly be effected, and we can only conjecture the probable form of inflammation which is commencing. When, however, effusion has already taken place into the tube, we shall be able to detect various signs by which the disease may be discriminated from those affections which most closely resemble it. Capillary bronchitis may be distinguished from general or ordinary bronchitis—

1st. By the degree of dyspnœa and lividity of the face being greater, and the prostration of strength not only appearing earlier, but being throughout more marked.

2nd. By the different forms of crepitant and sibilant rhonchi being at all times the prevailing physical signs.

3rd. By the cough being less severe, and the sputum being rather in the form of viscid masses composed of smaller pellets, than the diffluent muco-purulent expectoration of ordinary bronchitis.

From pneumonia, capillary bronchitis may be distinguished—

1st. By the general symptoms; the less sthenic character of the febrile disturbance, the greater degree of lividity of the face and extremities, the more rapid prostration of strength, and the earlier appearance of the symptoms of asphyxia.

2nd. By the physical signs; the absence of material dulness on percussion in the earlier stages, and the occurrence of abnormal resonance, either over the whole or greater part of the chest, at the later periods. The crepitation also is of a coarser character than that which characterises pneumonia, and is first perceived in the inferior parts of one or both dorsal regions, and thence rapidly spreads over the whole chest, and this sign tends rather to pass into the sub-crepitant and mucous rhonchus than to give place to evidences of consolidation.

3rd. By the peculiar character of the dyspnœa, cough, and expectoration. The respiratory movements are rapid, short, and hurried, rather than laborious and irregular, and there is sense of constriction in the chest, generally without pain. The cough usually comes on in paroxysms, and is fatiguing from its frequency rather than painful or very severe. The sputum consists of small whitish-coloured viscid masses, free from air, and wants the small air-bubbles, the russet colour, and adhesive quality of the expectoration of pneumonia. These signs, though sufficient to distinguish from pneumonia those cases of capillary bronchitis in which the pulmonary tissue is inflated, will not be entirely applicable when considerable portions of the lung are collapsed. In such cases, as in that of J—— which I have related, there will exist, in addition to the usual signs of bronchitis of the smaller tubes, the signs of the existing consolidation, such as bronchial respiration, voice, and cough; but—

4th. The history of the case, the ascertained existence of extensive bronchitis before the evidences of consolidation were present, probably also the sudden occurrence of the consolidation, and the persistent bronchitic character of the sputum, which, in cases of true pneumonic complication, would consist of a mixture of the spu-

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tum of pneumonia and bronchitis, will probably enable us correctly to conjecture the nature of the change which has taken place in the lungs.

Treatment.—After this brief outline of the symptoms, morbid appearances, and diagnosis of acute capillary bronchitis, it only remains for me to refer to the method of treatment which experience has shown to be most applicable for its relief. The great tendency of inflammation in any portion of the bronchial mucous membrane to become diffused over the whole of the lungs, and the general obstruction to the circulation which results, render it most important that a correct view should be early taken of the nature of the affection, and an appropriate system of treatment be speedily adopted; for if the first signs of pulmonary disorder be misconceived or neglected, and the disease be allowed to proceed to extensive effusion in the smaller bronchial tubes, the success of any course of treatment becomes doubtful. In sporadic cases of acute capillary bronchitis, occurring in persons of robust habit, general bleeding may sometimes be cautiously employed, but generally local depletion is all that is necessary or admissible, especially where, as is most frequently the case, the disease occurs in an epidemic form. Of the modes of local depletion, cupping is preferable to the application of leeches, being less fatiguing to the patient, while, if the scarificator be applied between the shoulders, direct relief is afforded to the organ affected. When time is of so much importance as in these cases, it is well also at once to commence the exhibition of calomel and opium, and to continue the calomel, so as to produce a slight affection of the gums. As, however, in the earlier periods of all forms of inflammation of the lungs, antimony is especially efficacious, it would be well to prescribe that remedy, either in the form of emetics or nauseant doses, so long as the patient's strength will admit. I have been led to believe that emetics afford most relief in these cases, while, as they occasion less depression, they can also be longer continued. When the inflammatory action has been in some degree subdued by antiphlogistic measures, blisters and other forms of counter-irritation may be advantageously employed.

When the disease has advanced into the third stage without having been actively treated, when crepitation is audible over all parts of the chest, and there is great difficulty of breathing, and prostration of strength, an attempt may be made to get rid of the redundant secretion by the exhibition of stimulating emetics, but the beneficial effect of these remedies is generally only temporary. Expectorants and diffusible stimulants may also be exhibited, though their usefulness much depends, as has been remarked by Dr. Stokes, on the previous course of treatment. When the patient has been neglected in the early stage, or when the depression of strength has precluded from the first the employment of depletion, the stimulating treatment is usually of little advantage; but when reducing measures are early resorted to, the subsequent exhibition of stimulants has generally a most favourable influence on the successful issue of the case. During this stage of the disease, sinapisms, blisters, &c., may be from time to time applied; but, under all circumstances, the convalescence is very protracted, and the patient's strength requires to be supported by nutritious diet, stimulants, and tonics.

In reference to the two cases which are the subjects of these lectures, you will perceive that the method of treatment here laid down was, with some modification, in consequence of the rheumatic symptoms, had recourse to. Both patients were cupped between the shoulders, and took calomel and opium, and antimonials. In the first case, which was under observation from the commencement of the symptoms, and the treatment was immediately had recourse to, the calomel was exhibited at longer intervals, and was combined with full doses of opium, and with the best effect. In the second, in which the disease was much more advanced before the patient came under treatment, so that the difficulty of breathing had already become urgent, and the patient was much prostrated, the calomel was more frequently given, and the opium was administered in smaller doses. In both cases antimony was exhibited: in the first in the dose of one quarter, and afterwards of one-eighth of a grain, and was continued throughout the progress of the disease. In the second, it was given in small doses of one-eighth of a grain, for a short time, when it was replaced by stimulating expectorants and stimulants, ipecacuanha, senega, ammonia, wine, brandy, &c. In both cases counter-irritation by blisters and sinapisms was had recourse to. The colchicum was exhibited in small doses of ten and fifteen minims in the first case, and of ten and five minims in the second, being continued in the latter in combination with ammonia, after the antimony had been given up. The doses of colchicum given in these cases, and especially in the second, were small. I have indeed long been generally in the practice of prescribing the remedy only in small doses, frequently repeated, with the view of preventing the occurrence of undue action on the stomach and bowels, and the consequent intolerance of the remedy. When exhibited in this form it exerts all its beneficial effects, and may be persevered in so long as the symptoms require its employment. I have before stated that the acute capillary bronchitis is not often seen as a sporadic affection, but most generally occurs as a complication of some form of epidemic disease. The combination with acute rheumatism, in which it was presented in the two cases which have been the subject of these lectures, is also far from common; indeed, the complication of acute rheumatism, unattended by any cardiac affection, with any form of acute bronchitis, is certainly rare; and it is well that it is so, for the complication adds very materially to the sufferings and danger of the patient, and may in some cases seriously embarrass the practitioner.

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CLINICAL LECTURE

Delivered at St. George's Hospital,

By CÆSAR HAWKINS, Esq.,

SURGEON TO THE HOSPITAL,
AND VICE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

1. *Secondary abscesses of joints and other parts following parturition.*—2. *Primary abscess in the iliac fossa following parturition; fæcal abscess.* 3. *Artificial anus after injury; chronic and acute.*—4. *Collections of fæces and abscess after ulceration of colon and cæcum.*—5. *Discharge of fæces with urine.*—6. *Calculus in kidney resembling fæces in the cæcum.*—7. *Kidney resembling tumour of liver, with fæcal abscess.*

1. The first subject which I am going to bring under your notice to-day, is that of a very interesting case of secondary abscesses after parturition, which has been very rapid and severe. It is the case of a young woman, Clara Watts, twenty-two years of age, who was admitted Feb. 17th, three weeks after her confinement, which is said to have been a hard one at the full period. Immediately afterwards she had very severe pains in the lower part of the abdomen, which was very tender to the touch; she had severe rigors, both during and after her confinement, in which she was attended by a midwife, and was delirious some part of the time. Her right leg and foot began to swell a week afterwards; it was very painful, especially about the ankle-joint. Her right arm and hand began to swell a week after the leg, that is, a fortnight after the labour, the wrist and finger-joints being chiefly affected; the left arm also began to swell within the last week, and she has had some cough for the same time.

On her admission she was very thin and weak; her pulse was weak and very quick, and her manner very hurried and anxious; her tongue was clean, but red and dry, from the irritation she laboured under. She had had very little sleep at night, and she complained much of pain in the back, having a bad slough on the sacrum. An abscess required immediate opening over the joint between the first phalanx and metacarpal bone of the middle finger of the right hand, and another with sloughy fascia and cellular tissue two or three inches long, on the back of the same arm, as if following the extensor tendon. I also opened an abscess over the back of the wrist of the left hand, several of the joints being very painful, and red and swelled. Her right leg was a little swelled and painful, particularly about the ankle, and there was a good deal of redness round a large dry slough, which covered almost the whole of the dorsal of the foot. There was also some redness and swelling on both sides of the left ankle-joint, and the least motion of either foot gave her much pain, as if both ankle-joints were affected; and besides all this, there was slight pain, tenderness, and swelling of the left knee-joint. Her right leg and both arms were extensively marked by caustic, which had been applied on the supposition of her having erysipelas, but it was abundantly clear that she was suffering under that secondary form of inflammation which so often follows the absorption of matter, and which produced, in her, the gangrenous inflammation I have described, of the right foot, as well as numerous abscesses, or threatened abscesses. In short, a morbid poison was circulating in her blood, which had entered the circulation from inflammation of the uterus, and of the veins or cellular tissue about it, which poison you so often see generated after accidents or erysipelas, or with any foul suppuration. You will do well to read a little work recently published by our former house-surgeon, Mr. Henry Lee, giving an account of the various facts connected with this dangerous condition, who has added to what was known on the subject, some very simple experiments made by mixing pus with the blood, showing its immediate effect upon this fluid, and showing also, how the mixture in this state may carry poison to all parts of the system. I have often seen pus mixed in considerable quantity with the coagula contained in the cavities of the heart and great vessels, in those who have died of secondary abscesses, or of the fever preceding their formation, so that it is no wonder that inflammation should be set up in any part of the body to which the poison is conveyed, and no wonder, also, when it is so extensive, as in this patient, that its fatality is very great.

Now as to the treatment of this case during the few days she has been in the hospital:—For the slough on the back she was directly placed on a water-bed, and endeavours made to change her position, to relieve her from pressure; this sore, I need not say, adds materially to her danger, and though it is not the immediate result of the poison, like the abscesses, yet it probably would not have happened but for the fever occasioned by the poison. Locally, besides opening several abscesses, as you saw, on the day of her admission, I have since had to open another on the left arm in front of the radius, and another on the outside of the left ankle, from which synovia also appeared to escape; this, however, has since healed up, and the inflammation around the joint is lessened. The house-surgeon has also opened another fresh abscess about the left scapula, and more of them may yet form. Regarding the constitutional treatment, you have seen that I ordered an opiate every night, which is of great use in husbanding the strength. I first ordered also, with the acetate of ammonia mixture, appropriate to her flushed and fevered state, a little bark; this she did not bear, and the saline with excess of ammonia was substituted for it; but I am again trying some tincture of bark, and camphor and ammonia, as the tongue has become more moist; and with these medicines she has from the first taken some wine, now half a pint, and two pints of porter, eggs, meat, and any nourishment she appears capable of taking; in fact, however, very little solid food, either bread or meat, has been taken yet, and eggs and wine and porter have chiefly sustained her. It is, I believe, on these principles that you must treat these cases, endeavouring

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to carry the patient gently through the period of fever and exhaustion by simple remedies, with support corresponding with the degree of depression present in each case. I have tried various remedies of more power, such as calomel and opium, which suggests itself as the proper means of subduing extensive capillary disease; and chlorate of potash, which is very useful in a not dissimilar condition, that of sloughing phagedæna; also turpentine, and other medicines; but they all seem to be of little avail; the patient's own powers and the amount of poison seem to be of more importance than specific or powerful remedies. You have seen this woman suffering very much at first, and on the fourth day she appeared sinking, and incapable of recovery; but yesterday she certainly seemed better, and to-day is considerably improved, so that I do not despair of her recovery. Her life or death must depend on two circumstances: the extent of affection of the lungs, and the condition of her knee-joint; for I need not say that secondary inflammation of an internal viscus, and an abscess in a large joint, must be infinitely more hazardous than any amount of suppuration in other parts. I am inclined to believe that there has yet been only congestion of the lungs, with a little pleurisy, so that the cough she now has, and which is rather better to-day, may indicate a condition which will stop short of suppuration. Even in the lungs, however, I have known patients recover, with such an amount of congestion as to bring up blood; and I have seen even foul abscesses evacuated from the lungs, and yet not prove ultimately fatal.

The condition of her knee-joint is interesting: there is formed, in the secondary inflammation of a joint, sometimes pure thick pus, and sometimes a mixture of variable quantity of pus with the synovia; and of course the greater the proportion of synovia, the more chance there is of absorption of the fluid, and of the patient's recovery. You will have observed the rapidity of the disease of the knee-joint; the slight swelling and tenderness of the 17th, the day of her admission, is changed on the 19th, so that the note says the knee-joint is rapidly filling with pus, slightly red, and exquisitely tender and painful on the least motion or touch of the part, and I began to consider the propriety of opening it, but did not do so on that day. The pain in these cases is sometimes nearly absent, but in others is very great, there being ulceration of the cartilages, as well as inflammation of the synovial membrane.

On the 22nd the knee-joint was less tense, and the pain less, but there was some fulness and swelling of the lower part of the thigh; the fluid, in fact, had ulcerated through the synovial membrane into the space below the vasti. If then it had been a perfect abscess in the joint, the case would only have been worse; the pus would not have been absorbed, and notwithstanding the apparent amendment of the joint, there would have been an extensive abscess occupying the greater part of the thigh, and when evacuated there would still have been a communication with the joint. If, on the other hand, it consisted in good measure of synovia, the fluid would much more easily be absorbed in the cellular tissue of the thigh, than if confined within the synovial cavity. Yesterday, the 24th, the joint became smaller, but not so the lower half of the thigh; to-day, however, I cannot help thinking that there is less fulness of both parts,—the joint is indeed quite flaccid, —and consequently that there may perhaps be no necessity for opening the joint.

That recovery, after such a state as this patient is in, is by no means impossible, is proved by some rare but fortunate cases every now and then. Many of you may remember a woman, about two years ago under my care, with a large abscess in the loins, and one in the shoulder-joint, which left only some stiffness from adhesions of the deltoid and biceps muscles, occurring, like Watts's, after confinement; and about three years ago was another case from the same cause, still more like our present patient's, as she was admitted after secondary abscesses of the hand and shoulder-joint had got well, with cough still remaining, and with an abscess of one knee-joint discharging some way up the thigh. She suffered a good deal from the ulceration of the cartilages, which was still going on, but before she left the hospital the abscess had closed, the health was restored, and the limb useful, though with anchylosis of the knee-joint.

[The amendment noticed in the lecture continued till the 1st of March, when a rigor took place, which Mr. Hawkins attributed to fresh absorption of pus, and a fresh abscess formed in the arm and leg; acute pain was complained of in the back of the left shoulder, with more cough, and rapidity of breathing; a foul abscess formed in the calf of the right leg, and the knee and ankle joints all inflamed again. She became gradually weaker, and died on the 4th. The following appearances were observed on examination after death, in addition to what has been mentioned in the lecture:—

The left knee-joint contained a large quantity of darkish-looking purulent matter, and at the inner side was an opening, which communicated with a long, sinous abscess, reaching as far as the upper third of the thigh, under the muscles. In both ankle-joints was purulent matter, without much indication of inflammation; the cartilages were absorbed, except at the most prominent part of the astragalus, where they gradually thinned off till they were lost; in one or two spots the bone presented vascular patches. The left wrist-joint contained purulent fluid, and the bones were denuded of their cartilage. The right knee and wrist joints were unaffected. In the left pleural cavity were three or four ounces of a clear fluid, and on the visceral layer of the pleura were some shreds of recent lymph; the parietal layer was very vascular. The left lung was pale and emphysematous anteriorly, but dark and congested posteriorly, on its surface. On section of the lower lobe and the lower part of the upper lobe, there were evidences of inflammation, and portions placed in water sank. The divided terminations

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of the small bronchi, on pressure, poured forth purulent fluid, and were surrounded by a small portion of lund, of a lighter colour than the rest, giving the appearance, at first sight, of purulent deposits. The upper part of the left lung was crepitant, and contained much frothy fluid. In the right pleural cavity were similar soft, yellowish deposits of lymph, and one or two adhesions. The lung, anteriorly, was pale and emphysematous on its surface, and on section was found entirely occupied by frothy serum ; it was crepitant throughout, except at one part, at the margin of the upper lobe, which was somewhat consolidated, and presented, to the extent of about a shilling, a portion containing much purulent matter on pressure. At the upper part were some divided bronchial tubes, containing purulent fluid, as in the left lung. The heart was healthy. The left cavities contained some coagulated blood, and the right cavities contained a large mass of fibrinous clot, filling up the auriculo-ventricular opening. There were one or two adhesions between portions of the small intestines, and the great omentum was adherent to the surface of the uterus. The ilium was much congested on its peritonæal surface. There was no fluid in the abdominal cavity. The broad ligament of the uterus, and the peritonæum in the pelvic cavity, were much congested, and the ovarian veins on both sides were enlarged and tortuous, the one on the right side being surrounded by much purulent matter in the sub-peritonæal tissue, at its lower part, and being filled with thick coagula. The ovary on this side and the Fallopian tube were intimately matted together, and there was purulent matter in the cellular tissue around the ovary, but the ovary itself was healthy. The Fallopian tube, on section, contained much purulent fluid. On the left side, the uterine appendages were not otherwise affected than by congestion. The uterus itself was larger than natural, and its walls, which were thickened, contained purulent fluid ; this was in the neighbourhood of the entrance of the right Fallopian tube. The cavity of the uterus was dilated, and the lining membrane intensely congested, and covered by a thin, bloody fluid. At the upper part of its anterior wall the lining membrane was very shreddy and vascular. The os uteri was much congested, and deprived of its epithelium. The intestines presented patches of vascularity in the ilium, and in the cæcum were several ulcerations of various sizes, with great vascularity. The other portions were healthy. The kidneys were rather large, and very vascular on their surface ; the fibrous capsule easily peeled off. On section, they were greatly congested, and in each kidney one of the pyramids was occupied, at its apex, by a deposit of firm, yellowish substance, which was striated at its commencement, as if it were deposited between the various tubes of its structure. The spleen was very soft and friable. The vena cava inferior, as well as the right common iliac vein, was found to contain much coagulated blood, but was not otherwise changed.]

Another consequence of inflammation of the uterus after confinement is the formation of abscess in the neighbourhood—primary abscess—produced by the extension of the inflammation along the broad ligaments into the iliac fossa, or by means of the round ligament into the inguinal canal.

Sometimes the inflammation is acute, and matter is rapidly formed. Some of you may remember, for example, the case of a young woman who was in the hospital nearly two years ago ; she lost her child thirteen days after her confinement, and followed its funeral on the sixteenth day, the natural consequence of which was inflammation of the uterus and adjacent cellular tissue. She came in four weeks afterwards, very ill with fever, sickness, pain and tenderness and swelling in the left inguinal region, which I was shortly after able to relieve by evacuating an abscess, which pointed through the inguinal canal, spreading along the round ligament into this part, just as you may see an abscess of the same part, or of the testis, from irritation in the prostate gland ; the vas deferens being the conducting medium in the male, as the round ligament is in the female.

2. You have now, however, under your notice a remarkable example of chronic inflammation of this part, no less than four years having elapsed since the patient's confinement, but suppuration having only recently taken place ; it is the case of Jane Burt, now twenty-eight years of age, who was admitted into Burton ward on the 12th of this month. She has been in the hospital twice before for the same complaint, and we had therefore better begin at the beginning. She was admitted in the first instance, July 28, 1847, with hardness and swelling, filling the left iliac fossa, and extending nearly to the umbilicus and pubes, and also to the upper part of the thigh, with pain and tenderness of these parts, the pain reaching as low as the knee, no doubt from the nerves being embedded in the thickened tissues ; her pulse was 80, and her tongue clean ; but she had occasional cold chills, and perspired greatly, and had been getting thinner and weaker. She had been confined five months before, and said that inflammation and pain came on in the right iliac region three days afterwards, but was relieved by leeches and other remedies. The left side inflamed shortly afterwards, with great pain and tenderness ; and although leeches subdued the disease to a certain degree, the present swelling remained. She required light tonics, support, and fomentations, pain and tenderness of the abdomen, with shivering, being sometimes observed. In the following month and beginning of September, blisters were applied, with the effect of lessening the pain and hardness. In October, it is noted that throbbing and shooting pain again required fomentation, which gave more relief than the blisters, and she left the hospital in November, using an opiate liniment. On March 29th, 1848, she was re-admitted, the tumour having been lately enlarging, and walking increased it still more ; the swelling is stated to have been more towards the lower part of the iliac fossa than before, and to extend more inwards towards the umbilicus ; it was hard and inelastic, and the inner

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edge was somewhat movable. With rest and blisters the swelling subsided a little; but the difference between her present and former state was this, that the thickened parts obviously adhered to the sigmoid flexure of the colon, so as to interfere with the passage of its contents downwards, and require a system of purgatives. She left at the end of June to go into the country, with some diminution of the swelling, but still complaining of pain from standing and walking, and she was admitted, as we have seen, a third time a few days ago. It appears from her statement, that having ever since suffered from the swelling more or less at different times, she had seven weeks ago become very ill, with violent pain in the lower part of the abdomen, and sickness. The swelling at the same time began to increase, and to give her more pain. She was very thin and weak; her tongue was red and dry from the fever she had suffered from; her pulse was small and irregular, and very quick; her appetite bad, and she slept very little. Her bowels, which were always costive since her former residence in the hospital, had been particularly confined, it appeared, just before the attack, which was therefore owing, in all probability, to obstruction in the colon, first observed three years before at the consequence of adhesions. There was, on her admission, a round prominent abscess, the size of a small apple, below the umbilicus, the skin being very soft and thin, and of a purple colour; and there was extensive deep-seated hardness of the lower part of the left side of the abdomen and iliac region.

Saline mixtures, and a morphia night draught were ordered, and she had arrowroot, beef-tea, and some porter, with meat, if she could take it. On the fifteenth, I opened the swelling, and found that it was chiefly filled with air, a few drops only of pus escaping at the time, though it is now copiously discharged from its deeper part. She has already much improved, some bark has been added to her saline, and a little wine has been given her.

Here, then, the inflammation, produced four years ago by parturition, has at last ended in suppuration, and when I opened the abscess, and found the cavity filled with air, I concluded that the colon, which had so long been adherent to the inflamed part, had been opened by ulceration, and that there was in fact a fæcal abscess communicating with the bowel. No air or fæcal matter has been observed, however, in the ten days the opening has existed, and although it is not unlikely that a communication may hereafter form, or may even now exist at a considerable depth, and of small extent, yet on the other hand it may be that the gas generated in the abscess has arisen solely from its proximity to the joint. You may, perhaps, remember a woman, in Hudson ward, who had an abscess in the abdominal parietes, of large size, near the umbilicus, in which, when I opened it, a great quantity of very fœtid gas was found, hardly leaving a doubt of its communicating with the transverse colon; but it did not prove to be so, and soon healed up again. Such abscesses not very unfrequently form near the rectum, and are excessively fœtid, poisoning a whole ward perhaps when opened, and yet heal up again in a few days.*

3. There is another case now in the hospital, which you have had under your notice for a considerable time, in which an unequivocally fæcal abscess has formed, in consequence, as it would appear, of an injury, and which is very interesting from the double perforation which appears to have taken place, and the probability of the patient getting well of her complaint. I allude to the case of Jessica Newman, twenty-six years of age, who was admitted as long ago as the 26th of June last. It appeared from her account, that she first perceived a swelling on the right side above Poupart's ligament, five months before, which formed an abscess, and burst two months after she observed it; that the discharge was thin, and of a brown colour, and resembled fæcal matter; and she attributed the swelling to a fall from a chair. On her admission, there were two large openings in the lower part of the abdomen, separated from each other by a bridle of skin; the probe did not go deep, but passed for a considerable distance in every direction under the skin, and the external oblique muscle was exposed below the integuments, at the bottom of the abscess. The extent to which the skin was undermined towards the ridge of the ilium, made me think it perhaps a lumber abscess making its way round, as it sometimes does, but she had not felt any pain in the spine, and therefore I directed the nurse to watch whether anything like fœcal fluid could be observed, and placed her on the use of bark and nitro-muriatic acid, with meat and porter, as her health seemed much affected by her illness. She at first improved a good deal, and the abscess seemed likely to heal, and it was not till July 19th that anything unusual was observed, when a little light yellow, thick, mucus-like fluid was seen mixed with the ordinary pus, which was however only seen on this day.

August 5th.—The abscess being stationary, and a good deal of loose skin with thin edges encircling the openings, I divided the bridle before-mentioned, and opened the skin more freely where it was most separated from the subjacent parts. This was followed by more pain and fever than usual from such an operation, and on the 8th, some more of the same light yellow discharge was evident, and a small perforation was now seen exposed in the part nearest to the umbilicus, into which the probe could be passed for the distance of nearly two inches, certainly below the muscles, and most probably along the bowel, the discharge from which showed that it was a portion of small intestine, and this continued till the 18th, especially before the action of the bowels, after which only common pus could be seen. During this time, fever, perspiration, and weakness were complained of, and were relieved, first by ammoniated saline and light diet, and afterwards by quinine and porter.

The yellow mucus was observed again for a day

* This patient was nearly well when she left the hospital, three or four weeks afterwards.

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or two on September 3rd, but without any illness, and again on October 4th, and the wound seemed during these two months to be slowly but gradually cicatrizing over the surface of the muscle and tendon. On October 28th, however, headache and sickness being complained of, some solid fæcal matter was observed to have come away with flatus, and was seen also on the 29th, and I found another small opening through the abdominal muscles lower down in the wound, and more to the right than on the former occasion, and the probe passed for several inches apparently along the bowel. It appeared, then, that the cæcum must have been the source of this fresh escape, since solid fæces do not exist in the small intestines, while the former opening, situated more to the centre of the abdomen, communicated with the small intestine, and gave exit to the peculiar yellow matter which is seen to come away from an artificial anus of that part of the canal. The solid fæces have not been observed since this time, but the upper orifice has several times, after apparently healing over, been again opened by ulceration.

There is one more circumstance in the history of this case which should have attracted your attention. Sickness and headache preceded this new escape of the contents of the intestines, but were not relieved by it; the same obstruction, which probably gave rise to the ulceration, continued; fulness and tenderness were felt between the openings and the umbilicus, and then general tenderness of the abdomen, frequent vomiting, and an anxious expression of countenance, pointed out some degree of peritonitis. Some small doses of calomel and opium three times on November 4th, and twice on two or three following days, relieved these symptoms, and on the 11th she was allowed to sit up, air escaping from the openings when she moved, and when the bowels acted, but not fæces. The same swelling, and slight peritonitis, again took place in December, and were relieved in the same way; but I found it necessary to confine her to bed, as walking about obviously increased these symptoms. Since that time she has progressively improved; no air or fæcal matter of any kind has been noticed for the last seven or eight weeks, the wound has got much smaller, and there is at present every probability of her eventual recovery, unless the contraction following the cicatrization of the wound leads to narrowing of the intestinal canal, and consequent obstruction of its contents in their course.*

In other cases, however, an artificial anus following an injury is an acute and dangerous disease; for example, a young woman, a nurse-maid, was admitted into the hospital about three months after she had been kicked on the right side of her abdomen by a child, whom she was carrying. The blow was followed by an abscess, which had probably ulcerated in both directions, communicating with the cæcum, and discharging through the skin; this communication produced constant diarrhœa, of an irritating kind, which excoriated the skin around the opening; and chronic inflammation of the mucous membrane of the ascending colon was fatal to her, by gradually undermining her constitution.

An artificial anus occasionally forms in a similar way without any injury, as the consequence of ulceration of the mucous membrane from chronic disease; the ulcer may penetrate the serous coat, and destroy life suddenly; or local peritonitis may save the patient by adhesions from this danger, and give origin to others, as when you see, and that not unfrequently, elongation of the adhesions, and fatal internal strangulation of a portion of bowel round them. Or, again, ulceration may go on after adhesion to the parietal peritonæum, and such an external abscess as you have seen in Newman may take place, discharging the gaseous or liquid contents of the bowel. More frequently these external openings are the sequel of tubercular disease of the peritonæum, such as scrofulous children are liable to, which glues the small intestines in such a manner to one another, and to other adjacent strictures, as seriously to interfere with the functions of the canal, and lead to ulceration of its walls. In one young lady, I remember, not less than three distinct perforations had formed in different parts of the surface of the abdomen.

We have seen that in Newman the probe used to pass in a straight direction for several inches within the bowel, which was very sensitive to its touch, so that, although sometimes blocked up, the ingesta, on the whole, have passed readily onwards, and very little medicine has been necessary on account of any obstruction. But suppose there is any sudden turn of the bowel, or contraction of the cicatrix, after the ulcer and artificial anus have healed: the consequence, as you may imagine, will be fatal. It is, in fact, according to my experience, by far the most frequent species of what is called stricture of the rectum, and you have seen its effects in a woman who recently left the hospital, in whom I had to lay open very extensive sinuses, running in every direction in the nates, labia, and vagina; and it may take place in any part of the intestines in which ulcers of the mucous membrane have formed.

4. I was asked to see a gentleman, in conjunction with Dr. Bence Jones and Messrs. Bullock and Dodd, who had been long in ill health, including in his symptoms pain in the left side; six months before I saw him he began to suffer from habitual constipation, but for the preceding month the action of the bowels had been regular. There was an enormous gangrenous abscess of the left side, crepitating with air, from the trochanter nearly to the short ribs, with a small slough at one part, emitting a very offensive odour through it. I laid it open extensively, with a little temporary relief, but his strength was quite exhausted, and he died two or three days afterwards. This abscess communicated with the descending colon by a sloughy opening of about three inches in length; the bowel below this was flaccid and empty, but

* The wound very nearly, but not entirely healed over, before she left the hospital, no air having been observed for a long time.

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above it was enormously distended, so that the diameter of the colon was nearly four inches, and the transverse colon had fallen down, as it were, from its weight of fæces, to the pubes, so that the small intestines were all seen between the stomach and colon, through the thin and elongated omentum. There was no disease of the mucous membrane, except at the opening, nor any inflammation of the peritonæum; and although the bowel was too much destroyed to make it certain that there had not been a thickened stricture at some former period, yet the appearance of the part of the circumference of the bowel which remained, looked much more as if there had been simple ulceration, cicatrized and contracted probably at the time the constipation began, with a restoration of a passage of the fæces downwards, in consequence of renewed ulceration a month before his death, but which at the same time allowed some fæces to get into the cellular tissue, and produce the gangrenous abscess which I found when called in to see him.

5. In this part of the intestinal canal, however, real stricture is very often found, and may lead to the same fæcal abscesses as simple ulceration of the mucous surface. The most extraordinary instance of this kind which I have seen was in a lady, in whom there had been for a considerable time some discharge of fæcal matter from the bladder mixed with the water. I examined the body with Mr. Keate and some other gentlemen, not having seen the case during life. A narrow stricture of the colon had ulcerated, so as to let the contents of the bowel above it escape into a circumscribed cavity of large size, formed by adhesions in the lower part of the abdomen, having the bladder and uterus below, and the abdominal muscles and peritonæum in front. Ulceration had taken place from this cavity, so that its fæcal contents passed in part into the bladder, and an opening had also formed in the lower part of the sigmoid flexure below the stricture; so that fæces had gone in this circuitous course through the cavity thus formed, into the rectum, without going through the stricture. Besides this, the abdominal parietes had been perforated in two places, so that in one place a large fæcal abscess existed below the external oblique muscle, and through the other aperture an enormous foul abscess, nearly gangrenous from the presence of fæces, distended the skin from the inguinal region to the axilla.

6. More often, as you might expect, mischief of this kind takes place in the cæcum on the right side of the body, the form of this part allowing of the lodgment of fæces, particularly if there is a plum-stone, or other solid body, to form the nucleus of a mass, which may attain a considerable size. You will not unfrequently see a tumour thus formed in women, particularly after pregnancy, and lasting many years, varying in size according to the freedom with which the bowels act naturally or by purgatives, and sometimes causing pain and tenderness when larger than usual, even when it stops short of ulceration. A collection of fæces thus formed in the cæcum and lower part of the colon appears like a solid tumour which is sometimes partly movable, though fixed at its base, and may appear like an ovarium, or other tumour; and, on the other hand, other bodies may occupy nearly the same situation. I was asked, some years ago, to see a lady, with Sir Benjamin Brodie, who had long had a solid body in this situation, which gave her at that time the pain and tenderness which an obstructed colon will occasion; but it proved that a large stone, formed in the right kidney, had drawn that body down, as it were, so as to be perceptible through the abdomen, and to interfere in some way with the bowel. The stone, I believe, is in the museum at present.

7. If a lodgment of fæces causes irritation in the cæcum and colon, it produces ulceration, abscess, and artificial anus, or fæcal abscess and gangrene. A singular and somewhat obscure case was under my care, about three years ago, in the hospital; and when the patient died, some time after she left us, I had an opportunity, with Mr. Sharp, of examining the body. This woman had a solid elastic swelling in the right iliac fossa, and on the outside also of the ilium, so large that it gave one the idea of its being a carcinomatous growth of that bone, likely soon to be fatal, from the emaciation and suffering it had caused; this opinion seemed to be confirmed by the appearance of a round, solid body, the size of an orange, not far from, though not apparently attached to, the liver. After a time, swelling took place in the loins, and an abscess formed, which I opened at the back of the ilium, so that I began to think I must be mistaken, and that there was perhaps a lumbar and psoas abscess, with caries of the spine. The disease, however, proved, after her death, to have been an abscess communicating with the ascending colon and cæcum by an opening of several inches in length, and an immense collection, of several pounds' weight, of a paste-like consistence and dark colour, existed in the loins and iliac fossa, formed obviously of fæces left in this situation, while the more fluid part had escaped, during many months. The round body felt in the abdomen was the upper end of the right kidney, which had been tilted forwards, in a curved form, by that part of the solid fæcal mass which filled the hollow of the lower ribs.

THE GLANDERS IN THE HUMAN SUBJECT.—A French veterinary surgeon died lately of glanders at Vats, (department of Charente.) Unfortunately some of the farcy matter from horses which the surgeon had attended, and caused to be killed, found its way into his own eye; and in spite of the most energetic treatment the poor man died in a few days. It is to be hoped that this case will serve as a warning to those who may have the care of horses affected with glanders; they cannot be too cautious.

THE CHOLERA IN NORTHERN AFRICA.—The Cholera, which had for some time past been raging in several of the provinces under French dominion in Algeria, and had made numerous victims, is now considerably diminishing in intensity.

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Clinical Lectures
ON
DISEASES OF THE CHEST,

Delivered at the Hospital for Consumption and Diseases of the Chest.

By THEOPHILUS THOMPSON, M.D., F.R.S.,
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LECTURE III.

Expectoration as a means of diagnosis; Its varieties in different conditions and periods of Consumption; 1st, salivary; 2nd, mucous; 3rd, flocculent; 4th, purulent. Proportion of saline matter. Changes indicative of amelioration. Bronchial polypi. Expectoration of conferva. Vegetable parasites in animal structures.

One of the circumstances to which your attention will be continually invited by patients suffering from pectoral complaints, is the "expectoration," a term which we use in its popular acceptation as applied to the material eliminated from the chest. I take an early opportunity of introducing this subject, as it constitutes one of the symptoms sometimes inadequately regarded by those whose minds are engrossed in the study of auscultation. It may be acknowledged that formerly conclusions were drawn from the appearance of the expectoration with unwarrantable confidence: great importance was attached, for example, to means by which pus could be distinguished from mucus, on the assumption that the presence of pus in the expectoration was a diagnostic mark of the existence of phthisis. We now know that this opinion is inaccurate, and that purulent expectoration may attend bronchitis and other affections, and be absent in consumption. At the present time, however, it may be more seasonable to warn you against the opposite error, and to show you how much valuable information may be derived from the expectoration.

There are certain general rules worthy of regard in connexion with this subject. Thus, if a person with some severe chest complaint coughs frequently, and expectorates only frothy, salivary-looking fluid, you suspect pleurisy. If another patient expectorates a glairy fluid, resembling white of egg, you suspect bronchitis; if the expectoration have a rusty tinge and resemble gum-water coloured with blood, you are not likely to err in recording pneumonia; if you are told of a sudden expectoration of a gush of pus in considerable quantity, especially if it be fœtid, you would expect to find that matter accumulated in the cavity of the pleura had found its way into the bronchial tubes.

We have said that purulent expectoration may occur both in bronchitis and in phthisis. When, however, long-continued purulent expectoration is unaccompanied with any distinct rhonchus, you may be tolerably certain that the source is a vomica, and not the bronchial tubes. Let us consider to what extent we may derive aid in our diagnosis of the existence and stage of phthisis, from examination of the sputa. We must not expect too much from this, or indeed from any other single symptom. Phthisis may proceed to an advanced period unaccompanied with expectoration, or the expectoration may be for a time suspended, especially under the successful employment of medical treatment.

In this patient, for example, S. A. M., whom you formerly examined, you have unquestionable proof of vomica in the cracked-metal sound, which you readily detect by making smart percussion in the second left intercostal space, but there is scarcely any cough, and that cough is dry. Still there are certain common circumstances regarding phthisical sputa, which may be briefly detailed. A member of a consumptive family feels a little out of health and has a dry morning cough; after a time the cough is attended with slight expectoration, at first salivary, after a short period becoming viscous, but transparent and homogeneous, subsequently dotted, and then streaked with blood, the striæ becoming by degrees more abundant. After a longer or shorter time, whitish opaque spots appear, the size of a pin's head, rounded or flattened, giving a pearly aspect to the expectoration. These multiply and enlarge, and ultimately form masses of an opaque white or dark grey colour, varying in size from that of a lentil to a two-franc piece, irregularly rounded and chequered at the side, sometimes streaked with blood and floating in a viscous, transparent fluid. At a more advanced period of the disease, the expectoration is purulent, spreads out into a porraceous mass, and shortly before death is often surrounded by a pinkish halo.

The changes thus described do not necessarily occur in so uniform a manner; but the most characteristic appearances of different stages of the diseases may probably be best illustrated under four divisions—namely, first, the salivary or frothy; secondly, the mucous; thirdly, the flocculent; fourthly, the purulent or porraceous. The first is what you would expect from irritation, the result either of pulmonary congestion or of slight tubercular deposit; the second would indicate a more confirmed affection of the bronchial tubes; the third is peculiarly characteristic of secretion from a vomica modified by the absorption of its thinner constituents; the fourth is indicative of phthisis far advanced, and (if unmixed with froth) usually involving both lungs. Let us see how far such a representation is in harmony with the facts at present accessible in the hospital. I show you some examples of simple frothy expectoration. The first is coughed up, in the quantity of four ounces in the twenty-four hours, by the patient I now introduce. W. G., aged forty-two, a postboy, admitted into the hospital Nov. 18, 1850, says he has been for eight years subject to asthmatical cough; fourteen months since observed some streaks of blood in his expectoration, and during the last fourteen months has been losing flesh; pulse 84; respirations, 28 a minute; height, five feet two inches and a half; vital capacity, 140. These circumstances are sufficient to make you suspect the nature of the disease; at the same

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time, the local signs are so slight—being almost confined to the existence of a little dulness on percussion at the apex of the right lung, and rather strongly pronounced breathing under the left clavicle—that we may reasonably come to the conclusion, in harmony with the appearance of the expectoration, that the disease is in the first stage, and not at present considerable. The second variety of expectoration is mucous, viscid, transparent. Two very good examples are before you. This patient, W. D., expectorates half an ounce daily of this kind of fluid; he is a gardener, has no hereditary liability to phthisis, and attributes his complaint to bad diet. He began to cough last August, and at that time expectorated about half a pint of salivary, frothy fluid in twenty-four hours. This patient's pulse is 78; height, five feet four inches; vital capacity, 155. The upper part of the left chest expands less than the right during inspiration, and is rather dull on percussion. The expiratory murmur is prolonged, being equal to the inspiratory at the apex of each lung. There has never been hæmoptysis. The disease is evidently rather more advanced than in the patient previously introduced to you; but as yet there is no softening of tubercle, and the expectoration depends on bronchial irritation. W. D.'s expectoration contains a little blackish matter, resembling what is often supposed to owe its origin to carbonaceous matter abounding in the London atmosphere; but the colour fades on the addition of nitric acid. It cannot therefore be carbon; it is rather the black matter of pigment cells, known to be formed under slight, not under severe, forms of bronchial inflammation. On applying a little heat, and examining this expectoration with the microscope, crystals, apparently of triple phosphate, may be seen. By the politeness of Dr. Garrod, I am able to show you another microscopical preparation of triple phosphate expectorated. It is from a patient in whom a strong impression had been entertained of the existence of phthisis. Dr. Garrod, however, ventured to pronounce the affection bronchial. The progress of the case has established the correctness of his diagnosis, and serves to confirm an opinion I am inclined to entertain, that the proportion of salts in the expectoration appears to be in an inverse ratio to the degree of inflammation present. Such an opinion is at least in harmony with the interesting observations recorded by Mr. Brett in the *Transactions* of the British Association for the Advancement of Science in 1837. As an approximation to the proportion of saline matter in the solids expectorated, we may mention from twenty to thirty per cent. in catarrh, from fifteen to twenty in the more opaque mucus of chronic bronchitis, and rather less than ten in the puriform expectoration of advanced phthisis.

Dr. Babington found that the addition of common salt after a time converted pus into a viscid mass-like mucus. Dr. Golding Bird perfected the analogy by adding soda to pus, and then transmitting through it a current of carbonic acid. (Guy's Hospital Reports, No. 6.) Chemically speaking, then, the watery, frothy-looking secretion of our first division is chiefly serum; the second, or mucous, is albumen mixed with saline material; the fourth, or purulent, the blood-globules devoid of their colouring-matter, combined with coagulable albumen; and the third, or flocculent, has the mixed character, varying according as the principal proportion of material is supplied by the vomica, or by the bronchial tubes.

In the next patient, the boy W. J., if you listen attentively under the right clavicle you will perceive, as he speaks, especially in a whisper, a sound resembling pectoriloquy. It is transmitted to the ear like bronchophony, but still it seems to me to be formed within a small, limited space. This is a case illustrating the difficulty of distinguishing between bronchophony and pectoriloquy. My own impression is that a little cavity is forming in this situation, and the appearance of the expectoration is favourable to this opinion. You will observe that although it is chiefly composed of transparent gelatinous-looking material, like that of W. D——, yet its surface is striated here and there with little streaks of pus. I examined this expectoration microscopically, not without the idea of finding saline crystals. In this I was disappointed, but I observed a peculiar conferva, of which I show you a drawing, resembling that described by Dr. Hughes Bennett, in the *Transactions* of the Royal Society of Edinburgh, 1841, part ii.



This conferva resembles the Penicillium Glaucum of Link, having jointed tubes dichotomously branched, and giving off at the extremity little spores arranged in bead-like rows.

It is the third variety of expectoration, however, to which I am specially anxious to direct your attention, because with scarcely any qualification you may regard it as pathognomonic of phthisis. Several specimens of this variety are on the table. When spat into water you observe it assuming the form of globular masses, like little balls of wool or

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cotton. Some of these masses have subsided, some are suspended at different depths, others float on the surface, sustained by bubbles of air, entangled in the surrounding mucus. Similar expectoration spat upon the plate has taken the form called by the French nummular, being in flattened, rounded separate masses, and assuming a shape not unlike pieces of money.

Some of the patients from whom these specimens were obtained are before you. Examine J. E——; you hear in the right subclavicular region two or three distinct clicks accompanying inspiration and expiration. This is humid crepitation, and so good an example of the clicking variety as to give appropriateness to the term of "clicking rhonchus," suggested, I think, by my colleague, Dr. Cotton, as applicable to this conclusive sign of softened tubercle.

E. P—— has distinct indications of vomica, and the cavernous gurgling attending her cough, heard under the left clavicle, accords with the information supplied by the ragged flocculent masses floating in her expectoration. We have now shown you progressive changes for the worse: let me indicate the reverse alterations characteristic of amelioration.

When the process of contraction is going on in a vomica, a diminished quantity of expectoration is a common and a favourable symptom.

C. V——, a month since, expectorated four ounces daily—now the expectoration has ceased. This result may partly be attributed to improvement of health under the use of appropriate regimen and the administration of cod-liver oil, but has probably been promoted by the inhalation of turpentine.

Profuse expectoration into a phthisical cavity is probably a cause as well as an indication of deteriorated blood, and measures which are consistent with a judicious regard to the accompanying conditions, may be advantageously employed in order to lessen its quantity. When the bronchial tubes contribute much to the supply, the skin being moist and the appetite defective, naphtha may sometimes be useful, but, generally speaking, tannic acid will probably be found a more appropriate medicine.

Under suitable treatment, the daily expectoration in L. D. is reduced from ten ounces to a few drachms, and instead of being, as formerly, purulent, has become serous and frothy. The physical signs correspond; pectoriloquy, although still existing, is less extensively heard than formerly, and the chest over the affected part is contracting.

You find in many of these spittoons a combination of purulent and frothy expectoration. In others, there is no froth. What is the import of this difference? Perhaps the frothy intermixture may result from the comparative immunity of one of the lungs from disease. The list before you is in favour of this opinion. This table gives a few particulars regarding the expectoration of twenty-nine patients at present under my observation. The figure 1 represent the stage of phthisis preceding softening; 2, that of softening; and 3, that in which vomica is detected. Such tables, although they may not present any special novelty, are not the less instructive, since they serve faithfully to exhibit all the facts under observation, and thus to counteract any tendeney to hasty generalization. (*For Table, see opposite page.*)

I may mention that one of these patients, J. L., entered as having phthisis in the third stage on one side only, but yet with unmixed purulent expectoration, has been carefully examined with a view to this discrepancy. The result of the examination is instructive. The entry was incorrect. There is not only gurgling rhonchus in the left subclavicular region, but cavernous metallic cough in the right interscapular region.

Phthisis, therefore, exists in its third stage in both sides. The patient to whom I refer coughs up the porraceous, quashy-looking expectoration of peculiar tint which I now show you, and which is of the kind usually occurring within two or three weeks, sometimes only a few days, of death. He is rapidly losing strength, and I fear the issue will soon determine the correctness of the indication.*

Let me take this opportunity of calling your attention to two preparations (on the table) of fibrinous moulds, resembling in form the roots of plants, which have been coughed up from the bronchial tubes. One of them is from a middle-aged woman residing in the country, usually enjoying good health, and not presenting any physical signs of pulmonary disease, who, without any preliminary symptoms, excepting a sensation of warmth in the chest, has, during the last four years, repeatedly expectorated these branched concretions. I cannot learn that she ever had hæmoptysis. I know little of the history of the other case, but believe that both patients are at present in tolerable health. Examples of this complaint are rather rare, but you will find descriptions of these "bronchial polypi," as they are called by Dr. Warren, in the *Medical Transactions*, vol. i., and by Mr. North. They are also figured by Dr. Carswell. Spitting of blood, although not constant in these cases, occurred in the two recorded by Dr. Watson. Those two patients are stated by Dr. Watson to have occupied chambers warmed by Arnott's stoves; but no such stove is used by the countrywoman whose case I have described. I do not think that these bronchial concretions have any relation to phthisis, or that hæmoptysis is a necessary element.

In one of the cases above noticed, Dr. Todd suggested as a probable explanation, that a chronic and limited inflammation of certain of the bronchial tubes first occurred, disclosing itself by no marked symptoms, but leading to the formation of tubular membranes; that after awhile these membranes began to be detached; that hæmorrhage resulted and continued till the separation was complete; and that at the same time some of the extravasated blood coagulated in, and took the shape of the air-

* This patient died sixteen days afterwards.

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tubes, and was afterwards expectorated. There is some difficulty in applying this explanation to all the instances in question. Opportunity may occur to me for the further prosecution of this subject; at present I will only propose the inquiry, whether the cause may not be a condition of blood requiring the elimination of fibrine, the direction to the bronchial tubes being a result of some accidental circumstance, rather than of inflammatory action, the proof of which was certainly wanting in the countrywoman from whom one of the preparations before you was obtained.

In the course of this lecture I have referred to the microscopical examination of the expectorated matter. In the way of diagnosis, as derived from the sputa, I fear, however, you will not find this important instrument aid you much. Now and then fragments of bronchial tube or of pulmonary structure furnish evidence of disorganizing disease. I could indeed give you an instance in which the existence of advanced phthisis was announced on the examination of a drop of expectoration sent from a distance, and microscopically examined; but at this advanced stage of disease, other conclusive signs are usually present, and yet the microscopical testimony may prove insufficient. At any period, unless much practised in such investigations, you may be embarrassed by the great variety of substances combined in the expectorated matter. In a specimen now under the microscope you will find, in addition to pus and mucus globules, chloride of sodium, epithelium from the mouth, muscular fibre, vegetable fibre, tartar from the teeth,—the materials of a meal having remained entangled for a considerable time afterwards. Nevertheless the investigation, although limited in its practical utility, opens views of no common interest.

I have already mentioned that on examining microscopically the expectoration of W. J——, I observed a peculiar object resembling a conferva, such as I had never before seen, but not much unlike the torula of yeast. A reference to the paper of Dr. Hughes Bennett in the fifteenth volume of the *Transactions* of the Royal Society of Edinburgh, soon convinced me that it was the fungus described and figured by that accomplished physician, and obtained from a phthisical cavity.

Name.	Age.	Diseases.	Stage.		Sputa.	
			Right side.	Left side.	Daily Quantity.	Character.
W. G.	42	Phthisis.	1	1	Four ounces	Frothy.
M. M.	29	Ditto. (?)	1	...	An ounce and a half	Ditto.
A. S.	37	Ditto.	1	2	Six drachms	Mucous and frothy.
W. U.	32	Ditto.	1	1	Two ounces	Ditto ditto.
W. D.	...	Ditto.	...	1	Half an ounce ...	Mucous; transparent.
W. S.	15	Ditto.	...	1	None.	
W. J.	14	Ditto.	(?) 3	...	Half an ounce ...	Mucous; transparent with yellow striæ.
G. S.	18	Hydatids.	...	...	Ditto	Mucous; peach-coloured.
W. H.	34	Phthisis.	1	1	Two ounces	Mucous and frothy.
C. B.	47	Emphysema.	...	...	Three ounces... ...	Salivary and frothy.
G. S.	29	Phthisis.	2	3	Four ounces	Purulent; a little froth.
W. K.	46	Ditto.	1	...		Mucous; frothy; sanguinolent.
E. H.	...	Ditto.	1	...	Ten drachms... ...	Mucous; frothy.
M. A. F.	32	Ditto.	...	1	None.	
M. B.	17	Ditto.	1	Cavity contracting.	A drachm and a half.	
E. H.	33	Ditto.	...	2	An ounce and a half	Muco-purulent; frothy.
S. A. M.	16	Ditto.	...	3, cavity contracting.	None	Formerly copious and purulent.
M. W.	18	Ditto.	...	1	None	
L. D.	21	Ditto.	3	3	Three drachms ...	Improving.
S. B.	21	Ditto.	1	1	Half an ounce ...	Mucous; frothy.
M. M.	29	Ditto.	...	1	An ounce	Frothy; sanguinolent.
H. B.	25	Ditto.	2	2	Four ounces	Muco-purulent; some froth.
E. P.	27	Ditto.	(?)	3	Ditto	Muco-purulent; flocculent.
L. B.	13	Ditto.	3	3		Flocculent.
S. A. B.	18	Ditto.	...	1	A drachm and a half	
M. M.	29	Ditto.	(?) 1	...	An ounce and a half	Salivary; frothy.
Mary M.	29	Ditto.	3	2	Two ounces	Purulent; nummular.
C. V.	20	Ditto.	3	3	None	Formerly copious and purulent.
J. L.	34	Ditto.	3	3	Three ounces... ...	Porraceous.

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PERIOSTEAL DISEASE AFFECTING THE DURA MATER.

By R. H. Golden, M.D. Oxon., F.R.C.P.,
Assistant Physician to St. Thomas's Hospital.

1. *Frequency of its occurrence.* 2. *Symptoms.* 3. *Autopsy of a patient suffering from this affection, killed by an accident.* 4. *Its identity with nodal periostitis.* 5. *The severity of its form as it occurs amongst sailors and tropical residents.* 6. *Not confined to them.* 7. *Diagnosis.* 8. *Treatment; results.* 9. *Occasional connexion with epilepsy and paralysis.* 10. *Cases illustrative of such connexion.* 11. *Demonstration of the identity of cause in the cases quoted.* 12. *These cases were not syphilitic in their origin.* 13. *The assertion is made from induction from a large number of facts under peculiar advantages for observation.*

1. The dura mater is supposed to be very little liable to disease, except as the result of injury, or in connexion with strumous softening of the petrous portion of the temporal bone, or with abscesses about the ear, or as the effect of the syphilitic poison; and this notion, supported by some of our best authorities, seems to have diverted attention from a very common affection of this membrane, of the same character as the periostitis which gives rise to nodes on the tibia or cranial bones.

This partial affection of the dura mater, to which I wish to call the attention of the profession, may or may not coexist with general periosteal disease. It is part of the same morbid state, and it has no necessary connexion either with syphilis or with mercury, though these poisons, and especially the latter, greatly favour its development. Indeed, the worst cases that I have an opportunity of observing, have been those who, in the tropics, have taken large quantities of mercury for fevers or hepatic disease, often many years previously, and have been afterwards exposed to cold and damp in our more northern latitudes.

2. When I held office at the hospital-ship *Dreadnought*, these cases were both very severe and very common, and I have no doubt, continue to be so.—They give way, at least, for the time, to very simple treatment—viz., iodide of potassa, with sarsaparilla, blisters, or issues to the head, and full doses of opium every night, with a good nutritious diet—in the same way as periosteal nodes are known to do. When the pericranium is the seat of the disease, it is at once recognised by the presence of great tenderness, as well as unevenness to the touch; but when the dura mater is affected, this morbid condition is not so palpable; it is, however, evinced by unmistakable symptoms. The patients are often free from pain during the day, but at eight or nine o'clock at night the pain sets in, and is so agonizing that they are willing to submit to any measure for relief. It lasts till three or four o'clock in the morning, followed by a profuse perspiration, when the patient gets some sleep. The intermittent character, and the time and duration of the paroxysms, are very remarkable. For some time the cerebral functions are not impaired, but at length the sufferer complains of a constant headache, though not so severe as during the paroxysm; he holds his head forward, with his brows knit: then follow occasionally epileptic fits, weakness of the lower limbs, paralysis, and the patient becomes greatly emaciated, despondent, and suffers colliquative perspirations.

3. Some years ago, a sailor, who had frequently been a patient in the *Dreadnought* for such attacks as I have described, was accidentally killed by falling between two ships in the river. This afforded Mr. Busk, my colleague, an opportunity of examining the head, when it was found that the inner table of the skull was greatly thickened, and also the dura mater

4. Such is the most marked and aggravated form of the disease occurring in patients debilitated by climate, mercury, purpura, or syphilis, which no one would fail to recognise as identical (except in situation) with periosteal disease, when it attacks the tibia, ulna, cranial bones, crest of the ilium, &c., in the form of nodes, and for which the iodide of potassium seems to be the appropriate if not specific remedy.

5. Although this aggravated form of periosteal disease of the dura mater is most common in sea-port hospitals, where the patients have been for the most part exposed to *all* the predisposing causes, yet observation has convinced me that it occurs also in a milder form, and therefore more likely to escape recognition, as the cause of many distressing headaches, ultimately leading to epilepsy or paralysis, or at all events reducing the sufferer to the most distressing state of debility; and patients so suffering apply to us for relief in our daily practice, both in hospitals and in private life. Such cases I have met with, both as out and in-patients at St. Thomas's Hospital, as servants in the employment of the Great Western Railway, and in private practice.

6. These cases are marked by headache, having its regular nightly paroxysms, morning perspirations, and gradual emaciation. The patients have mostly been treated for dyspepsia, rheumatism, gout, neuralgia, brow ague, and often for phthisis. I have several times been called upon to examine such patients' chests, as they were supposed to be obscure cases of phthisis, having, in addition to the above symptoms, some cough and bronchial murmurs; but by the peculiar expression of countenance, the pain and wakefulness during the first part of the night, the true nature of the disorder has been recognised.

7. A blister to the head, opium at night, and iodide of potassium and sarsaparilla during the day, have dissipated all the symptoms, and the patients have returned to their usual occupations.

8. It is interesting to know what becomes of these patients. The great drawback to the results of our hospital practice is, that we cannot infer that a patient is permanently cured because we do not see him again. On the Great Western Railway I have had an opportunity of watching the results. I have found that some have had no recurrence of the attack; others are subject to relapses after various intervals, but are always relieved by the same remedies; others are attacked by periostitis in its more generally recognised form; others are relieved only so long as they continue to take the iodide of potassium.

9. The connexion of this disease with epilepsy is often more intimate than is generally supposed. Without pretending that it is an universal cause, as we know that intestinal irritation and direct injury to the bones will produce epilepsy, it is as well, in obscure cases, to bear in mind that this is a possible cause, and one capable of being to a considerable extent, if not entirely, removed.

I have at present two cases of epilepsy under treatment in St. Thomas's Hospital, which I refer to this cause. The first, a man, in Luke's ward, No. 3, admitted February 25th, 1851: seaman. Epileptic fits occurring at various intervals, the last on Saturday. Constant headache; no sleep; profusely perspiring, and becoming very much emaciated. Has been eight months; was in Guy's Hospital for three months, and left it a month ago. He was then quite paralysed on the left side: he had a moxa on the crown of the head and electricity applied, and he nearly recovered the use of his limbs; but since he left the hospital he has become much worse, and is suffering more frequently from fits. Tongue clean, white, and indented

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with the teeth; pulse feeble; sight pretty good, pupils dilated; bowels constipated. Diagnosis: epilepsy with paralysis. Turpentine and castor-oil, of each half a drachm, to be taken directly.

Feb. 27th.—No worms passed, but a large quantity of pale and lumpy fæces; he was very sick and felt very cold all night. Calomel, two grains; rhubarb, five grains, every night; decoction of pomegranate, one ounce and a half; liquor potassæ, half a drachm, thrice daily.

March 1st.—Complains greatly of the head, especially at night; has had a fit every day since the last visit; bowels open, and fæces bright-yellow. Sixteen ounces of blood to be taken from the nape of the neck by cupping.

6th.—No change of symptom; felt a little relief after the cupping, but it was not permanent. It was thought better to change the plan of treatment. Meat diet. Zinci Valerianatis, two grains, three times a day in a pill.

26th.—The headache is worse, especially at night; head hot; no appetite; sweating profusely, and the fits occur twice a day; the paralysis increasing, and he is becoming imbecile; bowels rather constipated. Calomel, two grains; compound jalap powder, half a drachm, on alternate mornings; spirit lotion to the head; hair to be cut close.

29th.—No improvement whatever, always worse in the first part of the night. Under the idea that this case might be connected with disease of the dura mater, I prescribed as follows:—Soap and opium pill, five grains, every night; iodide of potassa, five grains, liquor potassæ, half a drachm; compound decoction of sarsaparilla, one ounce and a half thrice a day.

April 3rd.—Nothing can be more marked than the improvement; he has had no fit since the last visit; sleeps well; perspirations much less; he has still constant pain in the head, especially over the left brow, but the paroxysm is hardly perceptible at night; pain in the back and loins; bowels open. Shave the head and apply a blister. Porter, one pint daily.

16th.—The improvement has been constant and gradual. The blister was repeated to the scalp, and he has now a very slight pain over the left brow; pain in the loins; he has recovered his intelligence; looks and speaks cheerfully, and considers himself better than he has been for the last eight months. He cannot support himself without crutches, as his lower limbs are not only weak but somewhat paralyzed, but he is daily improving in that respect.

June.—I have been unwilling to discharge the patient until now, as he has been improving in health and strength. He has continued the medicine up to this time, and now has no complaint. No epileptic fit has occurred since the 29th of March; as he walks there is a slight dragging of the left leg. He will go out on Tuesday.

The next case that I shall refer to is that of a girl, Deliah Williams, aged eighteen; single; admitted in Mary's ward. She is chlorotic, and has only once menstruated, suffering severe headaches in nightly paroxysms, and epileptic fits every two or three days; profuse perspirations. There is dulness of intellect, which her friends say was not formerly the case. She was ordered, iodide of potassium, five grains; liquor potassæ, half a drachm; compound decoction of sarsaparilla, one ounce and a half, three times a day.—The head was shaved and blistered several times, and the result has been that the headaches have left her, and she has only had two fits since she has been taking the medicine.

I shall refer to a case of the same character, illustrating the connexion between cerebral symptoms and periosteal disease. A guard on the Great Western Railway had been under my care for general periosteal disease, some years ago. He was a very tall, thin man; had been in the army, and he was disabled for a time from the railroad service by the loss of the use of the right arm, from an affection of the shoulder-joint, which was relieved by the iodide of potassium, and a nitric-acid issue; he had likewise nodes on the clavicle and sternum, with night pains and perspirations. This man returned to his occupation as guard, and remained well for six months, after which he was suddenly seized with what was supposed to be an attack of apoplexy. He was insensible at the time, and was found early in the morning fallen from the bed, with loss of sight and strabismus: the mouth drawn on one side. He soon recovered under the use of iodide of potassium and sarsaparilla, and the application of blisters to the head. The previous history was the guide in this interesting case, which occurred under the care of Mr. Champneys, of Slough, with whom I saw it.

There was another instance of cerebral irritation lately under my care, in Luke's ward, St. Thomas's Hospital, presenting some points of interest.

John B——, No. 4, Luke's ward, aged seventeen, had been engaged in black-lead works; admitted Feb. 18, 1851, an engine driver; had been ill for three years, and imagined that he had got the black-lead into his bowels. Tenesmus, passing chiefly blood and mucus as often as sixteen times a day; bowel comes down; tongue natural; pulse soft and regular; skin moist; headache; no appetite. He was treated for dysentery: calomel and castor-oil; leeches to the anus; opium and aromatic mixture, with ipecacuanha. The purging continued till the 25th, (i. e., one week.) and all that now passes from the bowels seems to be pure bile.

27th.—He had a motion to-day, attended with great pain, and he described what passed as being like a mass of black pills, and very hard. The abdomen was soft, not sunken, and there is nothing to indicate mischief. He was ordered calomel and castor-oil, which brought away a large quantity of clay-colored fæces in a large mass, and pretty firm, followed by proper, loose, bilious matter.

April 5th.—Without any apparent cause he was seized with a most severe rigor and pain in the abdomen, and general convulsions. The first impression was, that the contents of the bowels had escaped into the peritonæum, and that the rigor was the consequence; the slightest movement increased the pain, and we could not get his attention to answer questions; his countenance showed an expression of extreme terror. There was no heat of skin or quickness of pulse beyond what would be accounted for by the convulsive efforts, and no sign of collapse. He was treated with opium in large and frequent doses; leeches and fomentations to the abdomen; calomel and castor-oil. In the morning of the following day he had a remission of spasm, and got some sleep, which we attributed to the opium; the bowels were opened, and what passed was semi-solid and clayey. The convulsion returned as severely as ever, and he took musk, two grains; camphor, one grain; watery extract of aloes, one grain, every four hours.

8th.—Convulsion fits continue at short intervals; complains of great pain in the abdomen, which is hard and knotty during the spasm, and quite soft during the remissions; stools quite black and copious; lumpy; pulse neither excited nor suppressed; great pain in the head. Calomel, five grains; opium, one grain directly; castor-oil in the evening; cut the hair; musk, two grains; camphor, one grain, three times in the day.

17th.—As the symptoms have continued unchanged, I do not mention the detail beyond observing that the

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stools became natural and bilious under such treatment as was calculated to allay any irritation, and yet promote the proper secretion of the chylopoietic viscera. He has had no appetite for food, and from the headache he complained of, I had discontinued any opiate for a time, but still the spasms and convulsions continue, and he takes the musk and camphor. The fear was that the boy would sink from pain. I ordered a blister to the head.

19th.—On my visit to-day I find B—— tranquil; he has had no more convulsion since the middle of the night, when the blister began to draw. Has slept well, and calls for the first time for food. Has no pain in head or abdomen; bowels have been relieved, but he is very feeble.

From this time he gradually regains his strength and takes meat and wine, and continues the musk and camphor, with occasional doses of castor-oil; but there is always an anxious expression of countenance, and he does not sleep well during the first part of the night, and suffers some headache.

May 12th.—Complains of pain in the abdomen, which comes on in paroxysms, and whilst the pain is present the abdomen is hard and knotty; anxiety of expression increased; meat and wine omitted; resume the musk and camphor.

17th.—He has been attacked in the night with the spasms as severely as before; has had no sleep, and he has taken two half-drachm doses of laudanum; headache very great; bowels rather constipated. Croton-oil, one minim; castor-oil, half an ounce, directly; foment the abdomen; tincture of Indian hemp, twelve minims; almond mixture, one ounce; three times a day.

23rd.—The hemp seems to give him some temporary ease, but still the spasms or rather convulsions continue, occurring about twice in the twenty-four hours; perfect paralysis on the left side. A blister is ordered to the head, when shaved.

24th.—The blister is risen well; and he seems better, but still relief is not so marked as on the last application of the blister; spasms still continue slightly, paralysis remains. Iodide of potassium, five grains; liquor potassæ, half a drachm; compound decoction of sarsaparilla, an ounce and a half, three times a day.

June 1st. B—— seems to be entirely relieved from all his spasms, as well as headache; use of his limbs restored; looks quite cheerful, and feels better than he has done for a long time before coming to the hospital. He returns to his meat and wine; continues his medicine, and after remaining in the hospital a month, is discharged at the end of May, apparently in perfect health, still continuing the medicine.

August 6th.—B—— saw me at the hospital, and appeared in good health.

11. The last case from which I have given an extract, contrasts with the previous one, inasmuch as its history would seem to point to intestinal irritation as the exciting cause of the disease, and it is only by the treatment and its result, that we can trace the irritation to the brain; for convulsion, and even paralysis, have been consequent upon intestinal worms, and removed together with the exciting cause; and I must confess that was the view that I at first took of the case; but it is to be observed that relief only followed such remedies as were applied directly to the head, under the supposition that the dura mater was in a morbid state, and that relief was then both immediate and complete; but it is only in connexion with other analogous cases that I would venture to take this as evidence. The guard's case also presented both paralysis and convulsion, nor was there any regular epileptic attack in either; but in the guard's all the symptoms clearly belonged to the brain, and the previous history indicated the nature of the attack. In case No. 1. there was paralysis with epilepsy, the nature of which could only be conjectured by the result, for it did not differ apparently from those cases which in lunatic asylums have always been considered nearly hopeless, as depending upon organic changes of cerebral structure.

In the absence of post-mortem demonstration, I think I have sufficient circumstantial evidence for attributing such cases as I have described to disease of the *dura mater*, and for considering that disease as essentially the same as the periosteal disease giving rise to nodes, but I hope that some additional light may be thrown upon this subject by the resident officers of county lunatic asylums, who must have large opportunity of examining such cases after death.

12. I find these cerebral lesions recognised in their graver forms as syphilitic and the test of their origin asserted to be their yielding to iodide of potassium and sarsaparilla, (See Dr. Todd's Lecture, *Medical Gazette*.) So far as the iodide of potassium test identifies them with periosteal disease, which in these cases affects the dura mater, I believe the distinguished professor to be right, but venture to deny the necessary dependence of periosteal disease on syphilis.

13. My attention has been directed to this subject for a long time, and seven years' practice at the *Dreadnought*, and seven years at St. Thomas's Hospital, have given me ample opportunity of following it out under peculiar advantages. All my facts have been carefully collected by myself, and noted at the time of examining the patients. It is obvious that a large mass of such details would never be read if published, useless to any one other than the collector, and if they have value, it is by their yielding general propositions, the truth of which depends both upon the accuracy of the observations, and the correctness of the induction. Fortunately, the truth of the propositions may be tested by the correspondence of new facts, not perhaps by every single fact, bearing in mind "that neither one swallow nor one day make a spring;" but we may expect such accuracy as is consistent with the subject matter. All who are conversant with clinical medicine must be aware of the existence of anomalies. With the advancement of knowledge, these anomalies will gradually arrange themselves under influences of newly ascertained laws, but in the meantime we must be content with probable, where we cannot obtain absolute, knowledge from induction, provided that the degree of probability is sufficient for our work; but every anomaly lessens the degree of probability of any inductive law, and many such would destroy its probability altogether; though when they are few in proportion to the normal facts, we may still admit the general law, under the supposition that we may have wrongly observed, or wrongly interpreted the anomalies.

The results of induction from cases of periosteal disease, will form the subject of the next communication.

To be Continued.

ON A CASE OF

OBSTRUCTED VAGINA, WITH RETENTION OF THE MENSTRUAL DISCHARGE.

By Charles Harwood, M.D., M.R.C.S.

I was called on the fourth of the present month to see M. F., aged sixteen years. It was stated that she had not been well for the last year and a half. About twelve months since she perceived a swelling of about the size of a bean, at the orifice of the vagina, which, however, was not accompanied with much pain or uneasiness. The tumour continued gradually to increase,

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and she has complained of pain in the loins and lower part of the abdomen, with monthly exacerbations of these symptoms. For the last three months these pains have been almost constant and very severe, and her general health has been much affected. She has also frequently had much difficulty in passing water.

On examination, I found the orifice of the vagina completely obstructed by a very thick membrane, through which distinct fluctuation could be perceived. The uterus was also felt distended above the pubes. It being night when I saw her, I prescribed an opiate, and the next day introduced a bistoury through the obstructing membrane, and guided it on my finger, so as to enlarge the opening to the full extent of the vagina. Immediately on an incision being made, the contents of the uterus and vagina began to flow, which were of a brownish-red fluid, of an oily consistence, to the amount of about three pints. By gentle pressure on the uterus, &c., all the fluid passed away, and tepid water was injected to wash out the vagina, both at that time and subsequently. The patient was immediately relieved, and passed a good night, which she had not done for weeks. No unpleasant symptom supervened; the injection of water was continued for a few days, and under this treatment the girl quickly recovered.

ON A CASE OF PLACENTA PRÆVIA.

By T. B. Oldfield, Esq., M.R.C.S.E., &c., Heckmondwike.

The frequent publication of cases of placenta prævia in The Lancet induces me to transcribe from my note-book one that has recently occurred in my practice, the issue of which will prove, that however differently others may proceed in the treatment of such cases, mine, at least, "though offering nothing novel," was as successful.

Mrs. P—— was taken in labour early in the morning of the 7th of June, and owing to the rapidity of her two previous confinements, a midwife residing in the immediate locality was requested to attend; but shortly after her arrival, Mrs. P—— being attacked with severe hæmorrhage, a messenger was despatched for me. I speedily arrived, and learned that slight pains came on at five o'clock A.M., but about eight she had a violent bearing-down pain, during which the membranes had ruptured, and immediately there followed a large quantity of blood, sufficient to induce fainting. The woman being placed in the usual position, I made an examination, and found the parts fully dilated, with presentation of the arm and umbilical cord; and in tracing the latter, I discovered that the placenta and arm completely blocked up the os uteri. As there was now an entire absence of pain, the pelvis being very capacious, and the vagina and os uteri quite relaxed, I determined to turn. I attempted to return the arm within the uterus; but failing to do this, I then passed my hand by the *side* of the placenta, and succeeded in reaching one of the feet, which I brought down to the external parts, and shortly after, without a second introduction of the hand, the other. A slight pain or two now came on, which, with gentle traction, soon terminated the birth of a fine male child, which was dead. The placenta immediately followed, and the woman recovered without a bad symptom.

A few years ago, I attended Mrs. P—— in labour of her first child, and with a trifling variation, it was precisely analogous to the one recorded above. In looking over my list, I find in the last seven or eight hundred cases of labour, only one of placenta prævia, with the exception of this I now communicate. In this case the placenta entirely covered the os uteri; turning was accomplished, and the labour terminated successfully to the mother.

ON THE DIFFERENCE IN THE DEVELOPMENT OF THE JAWS AND TEETH IN SEMI-BARBAROUS RACES OF MEN, AND OF THOSE IN A HIGH STATE OF CIVILIZATION.

By J. L. Levison, Esq., Brighton.

In submitting to your readers some important facts resulting from dental irritation in the organs of the mouth generally, and also some cases of the disturbance of remote organs, the effect of reflex-nervous action, permit me to call attention, in this paper, by the way of introduction, to what appears to be one of the penalties consequent on a state of civilization—namely that the jaws of civilized man are more contracted than the aborigines of different countries usually spoken of as barbarous, or semi-barbarous; that in civilized nations, the physiognomy is well marked; that the contraction of the jaws causes the permanent teeth to be either jammed together, or else there are induced various kinds of malformation: and in both instances, there exists a predisposition for the teeth to become carious, or remote organs are implicated, often inducing much functional disturbance in the brain, spinalis, and the chylopoietic viscera.

It will therefore be important to specify some few preliminary facts. The jaws of the African races, the South Sea Islanders, and some other barbarous tribes, form a half ellipsis; the lower, at its anterior portion, being a smaller curve than the upper, so that although the molars meet at their grinding surfaces when the jaws close together, yet the upper front teeth (including the incisors and cuspidati) shut over those beneath, and act as a pair of shears; and as a first process cutting the food into small pieces, prior to being conveyed to the grinding operation of the molar teeth. In the jaws of any of the races mentioned (unless injured by their civilized brethren,) there are usually thirty-two teeth (the permanent set) arranged in a very symmetrical manner, giving ample space for each tooth, and thus preventing the *dentes sapientiæ* from being jammed against the coronoid processes in the lower, or forced too near to the glenoid cavities of the upper jaw; whilst in the mouths of the most civilized people, the anterior portions of both are so contracted, as rarely to admit the proper arrangement of the incisors and cuspidati, without extracting the first bicuspid on both sides, and in each jaw. And so well marked are these peculiarities, that in a paper I read "On the causes for the decay of teeth in civilized communities," to the members of the Brighton Royal Scientific and Literary Institution, I ventured to state, "that if a number of national crania were placed promiscuously on a table, I would arrange them ethnologically according to their comparative degrees of civilization, merely by the form of their jaws and the position of their teeth."*

It may be asked whether these differences can be satisfactorily explained? Are they the result of some positive laws, or merely isolated and accidental consequences? That I may not appear presumptuous in attempting to answer these questions, I may premise that my experience is deduced from nearly thirty years' attention to the subject, and from numerous facts which I have collected. The following inferences seem to be correct:—That the difference in the jaws of barbaric races and those of civilized nations, is caused by the observance or non-observance of the physical and

* I do not wish to leave an impression that I am singular in my notions on this subject, for some months after reading the above paper, I read, in a number of the *Edinburgh Philosophical Journal*, a notice of an essay given by Mr. Nasmyth to the Ethnological Society, entitled "An Ethnological Arrangement of Man by his Mouth.

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organic laws during the period of the growth and development of the bodily organs; that the races of men with ample jaws and finely-formed teeth had lived the greater part of their infancy, childhood, and youth in the open air; that they had freely exercised their limbs, and partook of a simple diet; and that their brains had not been fatigued and annoyed with lessons in crowded school-rooms during their early days; and when taken out for a walk, they were not moved by a drill-master, but were allowed to act from the impulses of nature; that, in consequence of this sort of physical training, they had healthy appetites, and needed neither condiments nor stimulants. Headaches and languor they knew not, and when the evening sun declined below the western horizon, their previous fatigue procured for them healthy and refreshing sleep. In consequence of such obedience to the natural laws, their secretions were natural without being drugged with calomel. They had neither rickets nor distorted spines; hence all their bodily functions were normal, and the organs of the chest, the abdomen, and the mouth, were in consequence amply developed. And just because the converse of all this takes place in what is called "a state of civilization," the general stamina of the young is injured—their stomachs deranged—their brains rendered too irritable, inducing many affections, sometimes immediate and sometimes latent; and the mouth also becomes more or less implicated.

If the days of childhood were devoted to the goddess Hygeia, and the perceptive faculties allowed to exercise themselves by observing the wonders of art and the beauties of nature—then civilization would bring to all positive blessings, and a higher advantage co-existing with rude good health. It is true, that if these views were generally entertained, there would be less to do for dentists, of whom the saying which George Colman applied to authors, may be said of them,

"They wriggle along in shoals;"

and they might exclaim, if our suggestions were practised,

"Othello's occupation's gone!"

but the world would be spared much suffering and vast inconvenience. Physical health is one of the greatest sources of happiness to the child. Its value may be known by watching the gambols of well-formed children, with cheeks in which the rose and the lily blend most harmoniously, giving brightness to their laughing, happy-looking eyes, as they throw their pliant bodies and vigorous limbs into the most graceful attitudes, whilst bounding over the green-sward, like young gazelles, positively intoxicated with the joys of mere physical existence! Or watch them pursuing with agility the fleeting butterfly, or gathering wild flowers; every sense hath its full measure of enjoyment, and the stock of health thus daily laying up is a treasury of inexhaustible pleasure. Nor is this healthy condition of the body confined to the organs of motion, to the digestive organs, and to the mouth; but the brain, so essential for every mental operation, participates in this paramount advantage. The latter important organ (the brain,) being supplied with healthy and well-oxygenized blood, its quality is improved; its susceptibility is greater; its powers of endurance regular; its quickness of perception keener; and its impressions more lasting. So that, for all purposes, attention to physical development is proved to be most thrifty; for experience confirms the lessons which Nature renders so palpable; and if, in spite of all the warnings of ill-formed, contracted mouths, weak digestions, feeble bodies, irritable brain and nervous systems, we still force children to taste too early "the tree of knowledge," we must in every instance bear the certain "pains and penalties" for our contumacy.

To be Continued.

ON A CASE OF DEATH FROM RUPTURE OF THE UTERUS.

By J. Berncastle, M.D., M.R.C.S., &c., London.

On the 9th of September last, I was called, at eight A.M., to a woman in labour, who had engaged a midwife to attend her. On my arrival at the house I learned that the midwife had been sent for in the night; that she stayed with the patient until three A.M., when she said that it was no use her staying any longer, as it might be a month before the labour would come on; and she left the patient accordingly. Between three o'clock, when the midwife left, and eight, it appears that labour had come on, for I found the head of a full grown dead child protruding, and the pains coming on regularly; with the usual assistance the child was born about a quarter of an hour after my arrival. The fœtus had been dead at least a fortnight. The placenta followed quickly; there was no hæmorrhage; the uterus contracted immediately, and could be distinctly felt, like a cricket-ball, beneath the abdominal parietes. Having applied a bandage, and given an opiate, with the usual instructions that she was not to be moved, and was to be kept perfectly quiet, I left the patient remarkably well and cheerful, free from pain, talkative and not having the appearance even of having been delivered, so well was she in all respects. Two hours afterwards I was summoned in great haste to see her again, as she was dying. I went immediately, and to my great surprise found her speechless, cold, without any pulse, deadly pale, covered with a clammy perspiration—in fact, "in articulo mortis." No hæmorrhage appeared to have taken place, unless it was internal, which was the only cause I could imagine as accounting for such untoward symptoms. Stimulus was administered, but was of no avail, and she died an hour after being thus attacked.

It appears that the midwife, not knowing that she had been confined, called at about eleven to know how she was going on, when the deceased was very angry with her for having left her in the night, and ordered her to go away; that immediately after this sudden excitement she was seized as above described, although up to that period she was exactly in the very favourable state in which I first left her. I found also that she had had, before this one, two children born dead and two miscarriages, and that she had for years been suffering from pain in the uterine region, and had been under medical treatment for the same.

Having mentioned the case to a medical friend of great experience in uterine disease, he expressed a wish to be present at the post-mortem examination: supposing, like myself, that internal hæmorrhage would be discovered as the cause of death.

Post-mortem examination.—Body that of a well-formed, stout woman.—*Chest:* Heart and lungs perfectly healthy.—*Abdomen:* Liver, kidneys, and other abdominal viscera, all healthy, but pale. The uterus was large, uncontracted, and rose above the umbilicus. On examining the appearances presented about the lower part of the uterus, a dark, extravasated appearance was observed on the right side, at the situation of the right lateral ligament. On removing the uterus, which was done by cutting through its neck, a great quantity of blood escaped, and a number of clots, amounting to about two pounds, were discovered. The internal surface of the uterus was now exposed; but excepting that it was not contracted in the usual manner after parturition, it did not present any abnormal appearance. There was no effusion of blood in the cavity of the uterus itself. The neck of the uterus was now particularly examined, and it was found to present a ragged and ulcerated appearance, and was covered with blood, partly coagulated and partly fluid

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A great quantity of this blood lay immediately beneath the reflexion of peritonæum passing from the uterus to the bladder.

It appeared that there was an ulcerated condition of the uterus, which had probably existed for several years: and after the labour, it is probable that the wall of the neck of the uterus gave way, causing an effusion of blood, not only into the neck of the uterus, but also into the cavity of the abdomen, *beneath the peritonæum*; and that this sudden effusion of blood was the cause of the woman's death.

A question arises as to the period at which this rupture of the uterus occurred. Was it during labour, or during the excitement caused by the midwife's visit, when the symptoms first gave evidence of the accident? If it happened during labour, then it must be admitted that such an accident can take place and remain unnoticed by either patient or attendants for several hours: which is hardly probable, and contrary to the views of the highest medical authorities on this subject. In referring, amongst others, to Dr. Blundell's work, I find that he describes the symptoms of ruptured uterus thus:—"The woman, who seemed to be doing very well previously, perhaps exclaims that something has yielded, and then the countenance falls, the stomach vomits, the extremities become cold, the pulse rises to 130 or 140 in a minute, the pains become small, weak, and irregular; in a word death seems to have already seized upon its victim."

Nothing of this was observed for two hours after the confinement of this patient, nor until the sudden visit of the midwife produced a state of excitement which was immediately followed by a state very similar to that described by the author quoted. The question then remains—Did this rupture occur during the pains of labour, and remain unnoticed, or did it take place after the visit of the midwife, at which time only any evidence of it began to appear?

ON A

CASE OF CONGENITAL HYDROCEPHALUS, WITH SPINA BIFIDA, ETC.

By T. Smith, Esq., Surgeon, Great Milton.

I was called to Mrs. C——, of this parish, May 30th, 10 P.M., who had been in labour many hours, and in the hands of a midwife; the friends becoming anxious and alarmed, sent for me. On my arrival I learnt from the midwife that the membranes had been ruptured five hours, a great quantity of fluid unusually *green* escaping at the time. On examination I found the os uteri nearly fully dilated, and, as far as I could ascertain then, the head presenting; but high up the impression to the finger at first would have led me to suppose that the membranes had *not* been ruptured, (the midwife, by the by, says *she* ruptured them.) as I could plainly detect fluctuations, and these appeared to increase in extent as labour went on, which was regular as to pain, but very tedious in its progress, scarcely any advancement taking place for four or five hours.

After a time I could make out some of the cranial bones, widely separated, and I began to suspect effusion; the touch also gave to me something much more *dense*, and different to what we find from the membranes themselves. After waiting five hours matters went on more quickly, and at length I got a part of the head through the os externum. All this was exceedingly slow, but by degrees this great substance passed entire. Even at this time, however, we had no trace of the face, and it was some little time before the entire head or its bones came fairly into the world, the face turned laterally: here again we had another check: the shoulders and chest being so capacious, required much assistance. All shortly ended well; the child, a female, was dead, but had only been so a very few hours before my arrival. I was obliged to take away the placenta, as we had no pains to assist; the child's head, on being opened subsequently, contained nearly four pints, the bones very widely separated, even the frontal bone down its entire centre. It had, besides the spina bifida, great projection of the sternum, which was also a good deal curved, and there existed more or less deformity generally. The mother, who is doing well, recollects having been twice frightened by a cat. Had my patient not progressed when she did, I should have applied other means for her delivery; but we had pains and strength left, which did much for us.

ON THE

FUNCTION PERFORMED BY THE CILIARY PROCESSES AND BY THE PECTEN, IN THE ADJUSTMENT OF THE EYE TO DISTINCT VISION AT DIFFERENT DISTANCES.

By George Rainey, M.R.C.S.,
DEMONSTRATOR OF ANATOMY AT ST. THOMAS'S HOSPITAL.

The ciliary processes and the pecten being only secondarily engaged in the act by which the eye adapts itself to distances, and being dependent upon the change produced in the position of the lens, and in the form of the vitreous humour, by the ciliary muscle, it will be necessary first to consider the anatomy of this muscle; and as the ciliary muscle has its highest state of development in birds, I shall describe it more particularly as it exists in that class of animals.

The ciliary muscle in birds was discovered by Sir P. Crampton as early as 1818.* It is situated behind the more flattened part of the sclerotic coat, between it and the ciliary processes. It may be said to take its origin from some fibrous plexiform tissue, (described by Mr. Bowman.) continuous with the posterior elastic lamina of the cornea, close to some passages, appearing like large areolar spaces called the canals of Fontana, and also from the adjoining part of the sclerotic coat and passing from thence backwards, for the distance of one-eighth of an inch, to be inserted into the choroid coat at its junction with an elastic membrane connecting the choroid with the sclerotic. The ciliary muscle has in front of it the sclerotic coat, over which its fibres can freely glide; below and behind it, the elastic tissue connecting the iris with the sclerotic; and, more posteriorly than this tissue, the ciliary processes, with which its fibres do not appear to be connected. The ciliary muscle is striped in birds, in the larger species of lizards, and in some other reptiles. The elastic membrane above mentioned corresponds to the ciliary ligament. It extends from the line of insertion of the ciliary muscle into the choroid, backwards, to be attached to the sclerotic coat. It is an exceedingly thin membrane, but its breadth is very considerable, being about one twenty-fifth of an inch. It possesses great elasticity, as can be seen by extending it under the microscope, and also from its being composed entirely of elastic tissue. I was not aware that this membrane had been before noticed, until I was informed by Mr. Bowman that he had mentioned it in a paper read at the British Association for the Advancement of Science.

Now, considering these attachments of the ciliary muscle, and the circumstance of the choroid coat being loosely connected with the sclerotic, excepting posteriorly, it seems impossible to conclude otherwise than that the effect of its contraction will be to draw

* This description applies to the eye of the common fowl.

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the whole circumference of the choroid inwards towards the axis of vision, and thus to press the vitreous humour; and that this humour, being pressed all around, will be elongated in the direction of its antero-posterior diameter, and thereby cause the lens, with its capsule, to be carried forwards, and to be pressed more forcibly against the fluid in the posterior chamber of the eye. But as the aqueous humour is incompressible, and the posterior chamber completely closed behind and at its outer circumference by the capsule of the lens and the ciliary processes, which project a little into this chamber, the movement of the lens forwards will be impossible; and therefore this muscle would be useless, unless there be something which admits of ready displacement. Either the cornea must be forced forwards by the pressure exerted on it by the aqueous humour, or the blood must be pressed by this humour out of the ciliary processes. It is necessary to show which of these would require the greatest amount of pressure to cause it to give way. The facility with which the latter may take place will be apparent, first, from the consideration of the following anatomical facts,—namely, that the ciliary processes consist almost entirely of a net-work of capillary blood-vessels, which, posteriorly and on their deeper surface, are connected with those of the choroid by vessels which are smaller and have larger areolæ than on the other parts of the choroid; (these are by far the most difficult vessels to inject, and in plates of these parts they are frequently not represented;) whilst on their sclerotic surface the vessels are comparatively large, and communicate freely and directly with the vasa vorticosa; and, secondly, from the circumstance of the choroid, in the relaxed state of the ciliary muscle, being nearer to the sclerotic than when this muscle is in action; (this results from the curve described by the choroid being diminished when it is drawn inwards towards the axis of the eye, whilst that of the sclerotic continues the same;) so that unless there be some means of filling up the space between the sclerotic and choroid coats as it is being formed, the force exerted by the ciliary muscle would be partly lost in its effort to form a vacuum, or in its drawing the sclerotic coat in with the choroid, which, in consequence of being very strong, would doubtless not yield. Hence it is evident that the blood is both drawn and pressed out of the vessels of the ciliary processes at the same time; for, as the vasa vorticosa are being thus distended, the lens with its capsule is being pressed forwards, affording a mechanism by which any loss or misapplication of the force of the ciliary muscle is prevented, whilst the pressure required to empty the vessels of the ciliary processes, into the vasa vorticosa, is diminished. The aqueous humour being now made to occupy the space before taken up by the blood in the vessels of the ciliary processes will have the effect of enlarging the posterior chamber of the eye at its circumference, and therefore of diminishing it in a corresponding degree from behind to before, and thus be attended with an advancement of the lens. Placing, then, the facts and inferences above advanced, in contrast with the structure and great strength of the cornea, it must be obvious that the advancement of the lens, produced by the compression of the vitreous humour, is not attributable to the yielding of the cornea, but to the shrinking or collapse of the ciliary processes.

Now, so long as the ciliary muscle is in action, it is evident that the elastic membrane (ciliary ligament) is elongated, and upon the stretch; and that as soon as the former becomes relaxed, the latter will, by drawing the choroid coat backwards and outwards from the direction of the axis of vision, bring it close to the sclerotic, and thus, removing the pressure from the vitreous humour, allow the lens to pass back into its former place, whilst the blood is re-distending the vessels of the ciliary processes: the elastic membrane serving in this case as an antagonist to the ciliary muscle, and thus fulfilling the office of a higher form of tissue. These changes having taken place in the position of the lens, the eye will have resumed its passive state,—namely, that in which it is adapted for viewing distant objects.

At one time I was inclined to regard the compression of the vitreous humour in mammals as due to the muscularity of the choroid coat. I was led to this opinion from the great resemblance which I observed to exist between the fibres of the tapetum, when treated with a solution of chlorine or any vegetable acid, and striped muscular fibre. I am now, however, disposed to relinquish this view, as other properties belonging to this species of muscle are altogether absent from the fibres of the tapetum, and to regard the structure which has been described by several anatomists as the ciliary muscle in mammals to be in reality such, and to believe that it performs the same function as the ciliary muscle in birds does, although in the latter it is striped, but in the former unstriped. This seems especially to be the case, from the fact of the same difference existing in the fibres of the iris also in these two classes of animals, whilst their function is the same, both equally indicating muscularity, when physiologically considered. I will now make some observations upon the function of the "pecten," which I believe will not only show what that function really is, but which will also corroborate the correctness of the explanation above given of the use of the ciliary processes.

It may at first sight appear rather at variance with the explanation above proposed, respecting the mechanism of the ciliary processes, that these parts should be comparatively so little developed in the class of animals in which the ciliary muscle is most perfect, and in which also the adapting power of the eye is considered to be very great. It also seems somewhat at variance with my explanation, that there should not be some correspondence between the development of the ciliary muscle and the optical perfection of the lens, which, comparing these parts in the eyes of birds and mammals, does not appear to be the case. (The lens of the bird is much less dense, especially at its centre, than that of the mammal. This can be seen by drying the bird's lens, when it will be found to shrink more than that of the mammal, and, in the place of preserving its convexity, to become very much indented at its centre.) For if the adjusting power of the eye depended wholly upon the motion of the lens, one would expect to find co-existing with a lens of inferior density, (and consequently of longer focus,) and with a larger ciliary muscle, also larger ciliary processes, the distance between the geometrical focus of parallel and divergent rays being required to vary more under the same circumstances than if the focal distance of the lens were less. (see Wood's or any other work on Optics.) But if such had been the case in the eye of the bird, then birds must necessarily have had a more globular form of eye than mammals, admitting that the form of the eye of the latter is just what it ought to be; whilst, on the contrary, the eye of the bird is required to be much more flat, in consequence of the form and size of the head; therefore some other means must be looked for in the bird, to aid those already described, for adapting the eye to distances. Now, it must be recollected that in the eyes of birds, lizards, and some other species of reptiles, there is, besides ciliary processes, a distinct organ called "pecten," that it has the same structure as the ciliary processes, and that where one is large the other is small, and the reverse; and

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therefore it seems not impossible that the pecten performs a function similar to that performed by the ciliary processes.

Before considering further the office of the pecten it will be necessary to give a brief description of its structure and situation. The pecten is a plicated vascular membrane, present only in the eyes of birds, the larger kinds of lizards, and some other reptiles. In the common fowl it is situated at the inferior and outer part of the eye, extending from the entrance of the optic nerve, with which it is very much connected, almost as far forwards as the inferior and outer part of the lens, to which, however, it has no special attachment. Its form is quadrilateral. By its outer border it is attached to the sclerotic coat and optic nerve, following the oblique course of the latter through the tunics of the eye; this is between one-fifth and one-fourth of an inch in length. (It may be observed that in birds the optic nerve perforates the sclerotic coat on its posterior and *outer* side.) Its inner border is free in the substance of the vitreous humour, and not quite so long as the former. In the eyes of some animals this border is very short, and the pecten is then of a triangular figure; the distance between these two borders—that is, its breadth, is greatest at its middle, being about one-tenth of an inch: the surfaces of the pecten are so placed that one looks outwards and a little upwards; the other, of course, in the opposite directions. After it has been cut from a band of fibrous tissue, which connects it to the sclerotic coat, and drawn out under the microscope, it will be seen in the fowl and the pigeon to consist of about twenty oval folds, plaited like the folds of a fan, each plait, at its middle, which is its broadest part, being about one-fiftieth of an inch in depth, so that as two layers of membrane form each plait, the entire organ consists of nearly one inch in length of vasenlar membrane. The whole extent of this membrane supports a rich plexus of capillaries, resembling in their disposition and size those of the ciliary processes; it is covered also more or less by pigment epithelium. The vessels enter and leave it at its attached border. Now, considering the facts just stated, especially the manner in which the pecten is situated in the very substance of the vitreous humour, it will be evident that when this humour is compressed in consequence of the action of the ciliary muscle upon the choroid coat, the vessels of the pecten will be compressed also; and that, unless there be some express contrivance to prevent the escape of the blood from them, which there is no reason whatever to suppose, they will be more or less emptied of their blood, according to the degree of pressure to which they are subjected. It is further evident, considering the manner in which the pressure is exerted upon the vitreous humour, and the position of the pecten, that after the vitreous humour has been made to take up the space before occupied by the fluid contents of the vessels of the pecten, its form will be altered, being more flattened laterally, but rendered more convex posteriorly—that is, the quantity of fluid before contained in the vessels of the pecten, being subtracted from the entire mass of vitreous humour, the latter will have become pressed into a smaller spheroid, with its transverse axis shortened, whilst its antro-posterior one remains the same.

Now, it is admitted by all physiologists that the image of visible objects is in some part of the retina; therefore, the rays of light, to have arrived at this part, must have first emerged at the posterior surface of the vitreous body, and then crossed the serous space between the tunica vitria and the retina. It is certain that these rays, after their emergence, do not enter a denser refracting medium, or they would have been dispersed, and no image could have been formed; hence they may be considered to have taken their last direction at the instant of their emergence at the posterior surface of the vitreous body; and therefore, as the refracting power of lenses composed of the same material is in proportion to their degree of convexity, (Wood's Optics, 71.) so the rays emerging at the posterior surface of the vitreous body must be refracted most when its convexity is greatest, and *vice versâ*; and thus the rays of light are brought to a focus soonest when the ciliary muscle is in action: and in this way the pecten is made to contribute to the same end, though in a different way, as the ciliary processes, and to assist these in a form of eye where perfect adjustment is inadmissible solely by the motion of the lens. From the mobility of the retina, and the manner in which it is adapted to the posterior surface of the vitreous body, it is almost certain that these will always remain parallel and equidistant, whatever may be the change in the convexity of the latter, and therefore that the law of refraction, as influenced by convexity, will not be in the least affected in its application by the change of curvature which the vitreous humour will undergo from the effect of pressure upon the pecten. It has been noticed that the lens is less perfect in the bird than in the mammal; so the vitreous humour, having more to do in the former than in the latter, is more so. The vitreous humours of the fowl and sheep, dried under precisely the same circumstances, lost different quantities of fluid; the sheep lost 98 per cent., and the fowl only 93. We may now also see a reason why there should be a stronger ciliary muscle in the bird, and other animals having eyes of a similar construction, than in the mammal; and lastly, according to this explanation of the function performed by the ciliary processes, and by the pecten, in the adjustment of the eye to distinct vision, whenever we meet with animals having a very small head, but comparatively large eyes, we may expect that they will have these organs of a flattened form, with the sclerotic coat strong anteriorly; a large ciliary muscle, probably a lens of inferior density; a very dense vitreous humour; small ciliary processes, and a pecten.

Physiologists, in treating of the adaptation of the eye to distances, have attributed much to change of the convexity of the cornea, and but little or nothing to that of the posterior surface of the vitreous humour, although the effect in altering the focal distance of the eye is the same. It is true that the vitreous humour is very near to the retina, but still there is a serous space between them, as can be demonstrated by the facility with which air or fluid can be injected into it, especially at the posterior part of the eye; besides, there is, between the tunica vitria and the retina, a layer of very transparent cells. The minuteness of this space does not, however, affect the principle upon which the posterior part of the vitreous humour acts as a lens, since it is at the instant of emergence that the last direction is given to the emergent rays, and therefore the degree of refraction which these rays suffer will be in proportion to its convexity; and the position of the image with respect to the retina must vary accordingly.

ON THE EMERGENCE FROM THE SURFACE OF THE BODY OF PINS OR NEEDLES FORMERLY SWALLOWED.

By William Fraser, Esq., Surgeon, Aberdeen.

Recollecting to have lately seen in the columns of The Lancet various instances of pins and needles that had been swallowed, or otherwise introduced into the body, emerging from it in different ways, I am induced to send you the following case, from the extreme infancy of the patient in whom it occurred:—About

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three weeks ago I was consulted about a child five weeks old, originally strong and healthy, who had at once become affected with extreme costiveness, sallowness, fretfulness, and gradually increasing emaciation. The only treatment pursued was the alternate use of castor-oil and carbonate of magnesia, so as to produce at least one alvine evacuation daily. In less than three weeks from the first observed derangement of the child's health, he passed a pin of the ordinary size, (that is to say, about an inch and a quarter long,) smooth and sharp-pointed, but very much blackened on the surface. The mother, on whose veracity I can place entire reliance, states that, on uncovering her child in order to clean him and to change the napkin, she observed a small black body protruding from the anus, which, on being removed, proved to have been the head of the pin. Complete return to health almost immediately followed this unlooked-for occurrence. She has reason to believe that one of her children had forced the pin into the mouth of the infant while lying in the cradle; though it is difficult to conceive how so large a body could have found its way, without doing serious mischief, through the pharynx and œsophagus, and along the tortuous intestinal convolutions of so young a subject.

ALPHABETICAL NOTICES ON SUBJECTS CONNECTED WITH THE TREATMENT OF DYSPEPSIA.

By Robert Dick, M.D.

(*Continued from* May *No., p.* 424.)

Rhubarb is an instance of the happy union, in the same substance, of purgative and tonic properties. It suits almost every case in which purgation is indicated, except that of acute enteritic inflammation. Saline purgatives debilitate, and therefore only suit inflammatory and febrile cases; castor-oil simply evacuates; but rhubarb produces other good effects than merely unloading the bowels: it rarely operates in excess, and, after duly relaxing the intestines, its astringent property seasonably limits the action of its purgative one. It exerts an unequivocal tonic and invigorating effect on the digestive organs, and on the general system. It re-animates languid appetite, has no mean chologogue properties, and improves sanguification. It is suitable in almost every variety of apyretic dyspeptic derangement.

Ricinus communis.—Castor-oil, as we have remarked in the last notice, is a simple purgative. It operates mechanically, if we may call it so,—namely, by its oily quality enabling it to elude the muscular grasp of the bowels, and to glide along these; lubricating, in its transit, the internal surface of the intestines, and thus facilitating the passage of the alimentary bolus, or of fæcal scybala. It has little or no chemical or physiological action. When our object is absolutely nothing else than to unload the bowels, without either exciting or depressing *systematically*, castor-oil (next to an aqueous *lavement*) is that which most directly and simply fulfils our wishes.

When castor-oil acts irritatingly or in excess, or utterly fails to act, we have grounds for suspecting some adulteration or other.

By some persons the taste and smell of this oil are not reckoned unpleasant. The writer has had it presented to him as a salad-oil in Italy.

Rumex aquaticus and acetosa.—The sorrels. It is only on the latter that we propose offering a remark or two. It, as well as the rumex acetosella, or field sorrel, abounds in oxalic acid, (in the form of the binoxalate of potash,) tartaric acid, malic acid, tannin, &c. They are therefore carefully to be avoided by all persons of rheumatic or arthritic diathesis; for these acids, besides being absorbed into the circulation, and exasperating, in some peculiar way, the nervous system of persons with the diathesis referred to, seem to interfere with the due elimination of uric acid, leading to local inflammations of the cartilaginous tissues.

Salvia officinalis.—It is one of the bold speculations of Liebig, that the use of tea and coffee has been determined by their containing a nitrogenous principle, which renders them an acceptable or necessary substitute to nations who sparingly employ animal food. The theory strikes us as being a very fanciful and a very improbable one. Neither the Chinese nor Arabs are remarkable for a sparing use of animal food. The Chinese, indeed, are gross feeders, and use large quantities of ducks and geese. If infusions of nitrogenous vegetables had been sought, the bean, pea, &c., which abound in nitrogen, would have been selected. It is far more likely that it was the bitter taste and aromatic flavour of tea and coffee, conjointly with mere accident or some superstition or ignorant prepossession, that led two nations alone, among all the nations of the world, to the use of these plants. We will venture to predict that, on further examination, not a few of our indigenous plants will be found to contain identical or allied nitrogenous principles with those now supposed peculiar to tea and coffee, and as solving the singular enigma why the Chinese and Arabs came to employ these. We have an idea that such is probably the case with the article which heads this notice, and that, but for custom and fashion, it and other familiar plants, drunk with cream and sweetened with sugar, like tea, would be found to produce equally agreeable exhilarating effects with the latter, many of the elaborate eulogiums on which obviously rest on imaginary rather than any real grounds.

Tenesmus.—This unpleasant affection may have many causes direct or indirect; such as the passage of acrid, biliary, and other secretions, or irritation sympathetically communicated from a diseased bladder or prostate gland. An irritable, sub-inflammatory condition of the colonic mucous membrane, and the use of crude acerb fruit or wine, also not infrequently give rise to it. But a very usual though less suspected source of it is flatulence, which, by unduly distending the intestine, painfully affects the nervous twigs distributed in its coat. When the affection is seated in the stomach, duodenum, and small intestines, the best means are pills of assafœtida, or turpentine injections, produce prompt and complete relief.

In inflammatory states of the gastric and intestinal mucous membrane, the suffering caused by flatus is often very acute. The affection, if chronic, is temporarily relieved by the means above stated, but requires for its radical cure small doses of the bicarbonates of potass or soda, effervesced with citric acid or lemon-juice, followed by light bitter infusions, such as those of taraxacum, anthemis, &c., combined with hyoscyamus, &c.

Tobacco.—See "Alphabetical Notice," *Nicotiana*, in The Lancet, May No., p. 423.*

Ulmus.—This preparation is used in France and on the continent as an anti-spasmodic. It has slight diaphoretic properties, but I have not been able to satisfy myself that it acts otherwise than as an ordinary vegetable bitter. Some ascribe to it the virtues

* A trial of great interest of poisoning by nicotine has just taken place in Brussels. The poison was forcibly introduced into the mouth of the victim—a partially paralyzed and fatuous man.

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of a cutaneous alterative, but all diaphoretics more or less partake of these.

Urea.—We do not doubt that hereafter, when animal physiology, pathology, and chemistry are better understood than they now are, we shall avail ourselves, with effect, of several of the bodily secretions and excretions as medicinal means. We are of opinion that, in certain cases, *urea*, combined with some of the mineral and *mineralo-vegetable* salts, such as nitrate and acetate of potass, &c., may be advantageously employed as a *stimulant diuretic*. We have at present our attention directed to this most important subject. In the meantime we suggest it for the consideration of others.

Urethral spasm and irritation.—This may seem to be an affection remotely connected with dyspeptic derangement, but, in reality, we must seek for many renal and vesical irritations in disorders of *primary assimilation*. Of the secondary or tertiary derangements caused by these disorders of primary assimilation, none are more frequent than those of the kidney, bladder, and urethra. The character of the urine is one of the most delicate tests whether chymification and chylification have been normally completed; and we believe that *most* of the cases of structural disease of the kidney, irritation of the mucous membrane of the bladder, and spasm of the urethra, are remotely due to the development of morbid principles in the stomach and duodenum. It would engage us in too long and abstruse discussion to state on the present occasion, in detail, our grounds for this opinion, but we shall probably do so at another time; meantime, we merely call attention to the subject. We may add, that we believe the best treatment of many of the above supposed exclusively local affections, will be found to consist in rigid attention to the rectification of deranged *primary assimilation*. The *urinary* treatment is merely secondary and auxiliary.

Urine.—It occasionally happens that dyspeptic symptoms exist for a considerable length of time, without involving any derangement of the urine; the explanation of which probably is, that the kidneys are more than usually healthy and vigorous; and refuse, for a greater or less time, to separate from the blood any other than the normal constituents and the normal quantity of the urine. But at length, the morbid influence of ill-conditioned blood, constantly operating, seems to destroy the elective delicacy of these important organs, and to lessen the completeness of their organizing power over the solid constituents eliminated through them.

There is little doubt that our knowledge of the true constitution of the urine is still to be acquired. Probably this fluid contains several substances not yet ascertained; and in regard to some of those ingredients which are already known to exist in the urine, it is still doubtful what proportion of them is to be considered the normal one, or whether, in any proportion, the principles referred to are to be regarded as normal at all.

The most important analyses of the urine are those of Berzelius, Lecanu, Prout, and Becquerel.

We shall confine ourselves to a few very general and desultory observations.

Becquerel's estimate of the quantity of urine voided daily in France, is greater than that of England, according to Dr. Prout's calculation. Supposing both chemists to be correct, (which it is quite possible they may be,) we have, then, an important cause or consequence of the different character of the diseases of the two countries. The diet of the French people is unquestionably more *diuretic* (so to speak) than that of the English. Besides the acidulous wines of the former, the use of vegetables and vegetable soups is large in France. The contrast between the inhabitants of the two countries on this point is considerable.

Digestive derangements which affect the constitution of the *urina potus* indicate more deep-seated mischief, either in the stomachic or the renal functions, than derangements of the *urina sanguinis*.

Urine which immediately on being voided gives out a sensible smell of ammonia, generally indicates that the vital powers have suffered declension; that disease has become chronic; that the patient is past middle life, or is prematurely aged, &c.

In arthritic and rheumatic cases, the mineral and vegetable acids are carefully to be shunned. Among the latter the oxalic is the most objectionable; next, the malic: then, the tartaric, citric, and acetic. There can be little doubt that these acids act injuriously by their astringent effect on the cutaneous and mucous surfaces, by their thus interfering with their own elimination and that of the uric and lactic acids; thereby loading the blood with acidulous principles: whence follows that peculiar irritative condition of the nerves, constituting local affections, such as sciatica, lumbago, gout, or the systemic disturbance of rheumatic fever. It is amazing how difficult it is to rid the blood of this acidulous diathesis (if the expression may be used) when once it has been formed. The excernents seem to find it a peculiarly hard task to eliminate acids. Years of rigid attention to the dietetic ingesta are necessary. Hence the rarity of radical cures of gout and rheumatism.

ON THE CHEMICAL AND GENERAL EFFECTS OF THE PRACTICE OF INTERMENT IN VAULTS AND CATACOMBS.

By Waller Lewis, M.B., Cantab., F.G.S.

Much has been said and written on the decomposition of the human body after interment in the ordinary, and I may be allowed to call it, the natural mode—i. e., when buried in the earth. Very little, however, has been published on the process and results of such decomposition, when these are modified by the corpse being placed in a vault or catacomb. Even this little is incorrect in almost every important particular. I have been engaged for many months in the years 1849 and 1850, in inspecting the greater part of the vaults of the churches of the metropolis for the General Board of Health; and as I hope that in a short time the practice of entombment in receptacles of this kind will be prohibited, and the vaults themselves closed for ever, I consider it a matter of importance that some of the circumstances connected with these inquiries should be laid before the public.

Before the Report of the General Board of Health on Extramural Interments was laid before Parliament, the latest information we were in possession of was contained in a leading article in the *Times* newspaper, in the month of September, 1849. This was called forth by a regulation issued by the General Board of Health, during the prevalence of the late epidemic cholera. By this regulation, the authorities were enjoined not to allow any corpses to be placed in vaults, except they were in "air-tight leaden coffins." The following sentences are extracted from this article:—

"It is a dismal duty, and one which we do not very willingly undertake, to descend into the gloomy abodes of the dead—to make, so to speak, a show-box of the coffin, and to direct the public gaze on the shrouded slumberer within. It is, indeed, no beautiful spectacle, the so-called rest of a corpse after its soul has departed; and to observe how the dead man strives, after his fashion, to escape from his subterranean imprisonment with

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greater force than ever in life he could have exerted to tear asunder galling manacles, or burst through dungeon walls. These remarks may serve to explain the disapproval which we feel it our duty to express of an order just issued by the Board of Health, enjoining, as a condition of burial in intramural vaults, the use of air-tight leaden coffins. This order, manifesting, as it does, an inexplicable ignorance or disregard of the true objects and inevitable results of sepulture, requires at our hands a condemnation the more unqualified and explicit, as the previous measures of the Board, having uniformly been well-timed and judicious, may lend to this inconsiderate ordinance the *prestige* of a fallacious authority.

"Do the members of the Board of Health know what sort of substances they seek to confine, when they put a corpse weighing some eight or ten stone, into a box 'of sheet-lead closely soldered down?' Are they acquainted with the seventeen or eighteen chemical elements of which the human body is built up, and with the influence of confinement on the putrefactive combinations of these elements. Have they considered how, and by what process, that decomposition takes place, which leaves at the end of ten years only, a few brittle bones in the else vacant shroud? And are they aware of the terrible retribution with which nature will punish the violation of her law, if they persist in obstructing with leaden barriers the corporeal absorption of the dead?"

"In the first place it is to be observed that the putrefaction of a corpse cannot be retarded by the exclusion of air and water from its subterranean receptacle. By withholding from the putrescent corpse a free supply of oxygen, we promote, nay we positively cause, the formation of gaseous poisons so intense that their mere contact with a mucous surface of the body may occasion sudden death."

"The hydrogen of decaying flesh, which with a free supply of air would, by absorption of nitrogen, be chiefly converted into water, combines, within the airless coffin, with the sulphur of the hair and albumen, with the phosphorus of the bones and brain, and with the carbon of all the tissues, to form compounds all more or less noxious, and some of tremendous virulence. Among the products with which hydrogen thus combines is cyanogen, itself a compound of carbon and nitrogen, and which, with the addition of hydrogen, is converted into the terrible poison known as prussic acid; an agent so deadly, that one drop of it placed on the tongue suffices for the destruction of life."

"The pent-up gases first produced will exercise on the compounds subsequently formed, a pressure, the effect of which will be to change their composition and increase their virulence. The coffins will be bulged by the expansion of the elastic fluids generated under compression within: the acrid products of decomposition will gradually corrode the lead; and when, some few years hence, these horrible receptacles burst, the fumes emitted will destroy those who happen at the moment to be in their immediate vicinity, and will diffuse through our metropolitan atmosphere, the elements of a pestilence probably more virulent than that from which we are just emerging."

"We have really only two practical alternatives as to the disposal of the resulting gases—they must either be burned or breathed."

From the above extracts, it will be seen that the following assertions are brought forward:—

1. That among the products of decomposition are cyanogen, hydrocyanic acid, sulphuretted, carburetted, and phosphuretted hydrogen gases.

2. That all leaden coffins become bulged by the expansion of the elastic fluids within.

3. That the gases are pent up until the coffin becomes so corroded by them as to be unable any longer to confine them.

4. That the coffin then suddenly bursts, and the gases escaping, are capable of destroying all within reach.

5. That these effects take place within ten years.

6. That the putrefaction of a corpse is not retarded by its being placed in an air-tight leaden coffin.

7. That the gases should be burned to destroy them.

Some of these allegations were so consonant with theory and common report, that one of the most eminent chemists in Europe, with whom I communicated on the subject, said that he "was not prepared to deny any one of them." He added, however, that he believed all the deductions were merely theoretical as he knew of no experiments that had been made on the subject.

I therefore determined, with the sanction and approbation of the Board of Health, to ascertain, by actual experiment, every particular of the process of decomposition as effected in leaden and wooden coffins in vaults and catacombs, as well as for the purpose of keeping a record of the state, condition, and contents of these subterranean receptacles.

I have accordingly now carefully inspected between fifty and sixty vaults of the principal churches in London, and have examined the external condition and appearance of more than 22,000 coffins. I have also examined the state of the contents of nearly a hundred. The results of these investigations are so different from what could have been anticipated, and from what was generally believed to be the case, that I think it important to lay them before the profession previous to the practice of interment in vaults becoming a matter of history.

I may add that I have not relied alone on my own researches, but have taken the evidence of all the clergy, churchwardens, sextons, and undertakers of every parish in which I could possibly obtain it. The following are some of the conclusions I have come to from these varied sources of information. It will be seen that they are all in direct contradiction to the allegations contained in the *Times*.

1. I have never succeeded in obtaining any trace of the presence of cyanogen, hydrocyanic acid, sulphuretted, phosphuretted, or carburetted hydrogen gases, even in the smallest quantity. In several instances I analysed the air of the vaults themselves, and in one only, namely, in that of St. Mary-le-Strand, was there any indication of the presence of any of these. This was sulphuretted hydrogen in a very minute proportion, and there was no certainty of this being derived from the decomposing bodies, which are here only thirty-two in number. I examined gases formed by bodies of persons of all ages, from the still-born infant to those who had survived to the age of ninety-two. The coffins had been in the vaults various lengths of time; those that had been there a week were examined, as well as those that had remained there a century and a half. Death had been caused by accident, by age, by disease. The latter had been of the most varied kinds—typhus, phthisis, small-pox, childbirth, dropsy, and cholera.

Not one of the above circumstances seemed to influence in the slightest degree, the composition or character of the gases. These were most remarkably similar in every instance. *All the gases I analysed or otherwise examined were composed of nitrogen and carbonic acid gas, mixed with atmospheric air, and holding decayed animal matter in suspension.* There was but one ingredient that was sometimes present, sometimes entirely absent; this was ammoniacal gas, which was

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sometimes present in very large quantities. When this was added to the other gases, it overcame all other odour; when it was absent, the smell much resembled that of very putrid moist cheese. In every instance I searched most carefully for the presence of the hydrogenous gases mentioned, but never found the slightest trace of any one of them.

Another proof, if any were wanting, of the absence of sulphur in any considerable quantity as a product of decomposition, is, that although the metal of many of the older coffins had been acted upon, the substance thus formed was always a carbonate, never in a sulphuret or sulphate of lead.

2. *All coffins do not become bulged* by the expansion of the elastic fluids within. On the contrary, so rarely is this the case, that it is the exception instead of the rule. In many vaults there was no instance of a coffin that had bulged, or, as the undertakers say, "blown." In 22,000 I could not find 20 that were or had been in this condition. This is to be accounted for by the fact that lead is so porous a metal that it allows the exosmose or transudation of the gases with great facility, more especially when there is pressure within. It is well known that even the iron gas pipes so thickly underlying our pavement cannot be made retentive of the gas.

3. The gases, therefore, are but very rarely pent up; the instances of "blown" coffins not averaging one in a thousand.

4. *The coffins do not suddenly burst, and the escaping gases do not destroy all within reach.* From the most searching inquiries from coffin-makers, undertakers, and all persons most likely to be well informed on the subject, I have never obtained any sufficient evidence of the sudden rupture of a coffin. It is universally the custom of sextons, when they perceive any leaden coffin to be blown, to send to the undertaker for the purpose of having a hole drilled in the upper part of the lead, so as thus to allow the escape of the foul air. During the operation, the parties employed endeavour to avoid inhaling the gas, and sometimes hold a piece of burning wood or paper at the orifice, so as to destroy in some measure the offensive odour I have described. In my opinion, the fact that coffins so rarely become bulged, is to be ascribed to the great porosity of the metal employed. When slightly bulged, the lead, from being thinner than before, becomes more pervious to the contained air.

The action of the putrefactive gases on the human frame, although not so immediately fatal as the *Times* would have us believe, certainly produces many disagreeable symptoms. In my own person, the most prominent among these were nausea, with vomiting, after continued exposure, succeeded by diarrhœa. These are followed on the succeeding day by a throbbing pain in the upper part of the head, great prostration, and entire loss of appetite, accompanied with an unpleasant earthy taste in the mouth. These symptoms, after being experienced for a long time, were followed by a series of boils, accompanied with much phlegmonous erysipelas, and requiring surgical assistance.

On one occasion, however, I was nearly meeting with an exception that would have corroborated, to a certain extent, the assertion that sudden death may occur from such exposure. I was examining the large vault under the church of St. Andrew's, Holborn, which contains about five thousand coffins, partly of wood, partly of lead. They are placed in eight arched culs-de-sac running off on either side of the central passage. The air in these compartments is in a state of almost complete stagnation, as there is no ventilation in them. The coffins are piled one above another from ten to thirteen high, and reach to within a short distance of the roof. There is scarcely sufficient room to allow a man to crawl on all fours between the upper coffins and the bricks of the arches. Wishing to see how far these compartments filled with coffins extended, I sent the sexton in with a candle. In a very short time, observing the flame begin to lower, and give very little light, I called to the man to come out immediately. He instantly obeyed, and after much exertion and the extinction of the candle, he presented himself in a pitiable condition, his eyes half starting from their orbits, breathing deeply, and evidently much oppressed. Exposure to a current of fresh air shortly revived him. The air being mixed with a large quantity of carbonic acid gas was the cause of this nearly fatal accident—not the presence of cyanogen or any hydrogenous compound.

5. The complete decomposition of a corpse, and its resolution into its ultimate elements, is by no means accomplished in a period of ten years; nor is that description accurate which represents, that at the end of that period nothing "but a few brittle bones are left in the else vacant shroud." On the contrary, so extremely slow is the process under the circumstances, that I have but rarely seen the remains in a leaden coffin of any age in the condition described. In a *wooden* coffin, the remains are found exactly in this state in a period of from two to five years. This period depends upon the quality of the wood, and the free access of air to the coffin. But in leaden coffins, sixty, eighty, and even a hundred years, are required to accomplish this. I have opened a coffin, in which the corpse had been placed for nearly a century, and the ammoniacal gas formed dense white fumes, when brought into contact with hydrochloric acid gas, and was so powerful that the head could not remain near it for more than a few seconds at a time.

6. *The putrefaction, therefore, is very much retarded by the corpse being placed in a leaden coffin.*

7. If by this assertion it is only meant that the gases should be passed through flame, to destroy the organic particles mixed so largely with them, this can be understood. This difficulty would however, still remain: except in the few exceptions I have mentioned of blown coffins, the gases are so slowly generated, that no force would be exerted from within sufficiently powerful to expel them. But if it is assumed that these gases can be inflamed like coal gas, I must deny the possibility of this. I tested the gaseous contents of nearly a hundred coffins, some of which contained a considerable quantity of gas. In no instance would the gas inflame; on the contrary, *in every instance*, it extinguished the flame. In addition to my own experiments, I made the most minute inquiries of churchwardens, clerks, undertakers, and sextons, but I have never met with any person who has actually *seen* coffin-gas inflame. Several have told me that they have *heard* that it does, but they did not know the fact from their own experience. Some of the officials of St. Anne's, Soho, pointed out a coffin to me, which, having some years ago become blown, had been "tapped." They asserted that a long blue flame had been obtained by firing the jet of gas which issued from the aperture. The smell was described as that of sulphuretted hydrogen; but not one of these persons was present at the time. If, therefore, this or any other hydrogenous compound is ever formed, as a result of such decomposition, it is an extremely rare exception.

The following are the conclusions I have arrived at from these investigations:—

1. Interment in vaults and catacombs should no longer be permitted. No good object is gained by this practice. The corpses so treated are by this means converted into so many active volcanoes, con-

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stantly emitting poisonous effluvia into the atmosphere, for an indefinite period.

2. That after a certain interval, during which friends or relatives should have the power of removing any coffins from the vaults to the public cemeteries, all these receptacles should be hermetically closed, and future access thereto forbidden.

3. The use of leaden coffins should be entirely discontinued; they only add to the already exorbitant charges of undertakers. Until a very late period they were constantly stolen from the vaults, emptied of their contents, and sold as old lead.

4. If the object of interment is to allow the human body, after it has served its purpose here, to return as speedily as possible to its elements, and to become perfectly inert, it should be placed in a light wooden coffin, from five to eight feet deep, in a suitable pervious soil.

ON A CASE OF DISEASED KIDNEYS, WITH MALFORMATION.

By Frederick Robinson, M.D.,
Assistant Surgeon 74th Highlanders.

Private William G——, aged twenty-two, a Scotchman, in the service four years and three-quarters, was admitted into the Regimental Hospital, at Clonmel, on the 24th of August, from a detachment at Ballinamull, where he had been under treatment fourteen days, for dropsical symptoms. At the period of admission, there was considerable general anasarca of the whole body, together with a quantity of fluid in the abdomen; the skin pale, and pitting on pressure; the countenance very pale; the scrotum much distended; considerable dyspnœa and orthopnœa; pulse very small and feeble, 76, skin cold; appetite tolerable; bowels regular; urine clear and copious. He had suffered previously from syphilis, which had impaired his health.

After his reception into the hospital, he derived temporary benefit from combinations of various diuretics, and continued to be alternately somewhat better and again worse, until the 22nd of September, when all the symptoms became much aggravated; the effusion and consequent dyspnœa very great; coma ensued; and he died at two o'clock A.M. on the 25th of September.

Post-mortem examination, twenty-four hours after death.—Head not examined. The chest contained about a pint and a half of serum. The right lung was much congested, and gorged with serum in the inferior lobe and base; tissue healthy. The left lung presented similar appearances to the right. Heart: the pericardium contained five ounces of serum; both ventricles somewhat hypertrophied, and the left contained a firm fibrinous polypus. Abdomen: this cavity contained about two quarts of straw-coloured fluid. Liver slightly larger than normal, and much congested; structure tolerably healthy. Kidneys: the right, situated on the bodies of the fourth and fifth lumbar vertebræ, externally mottled and pale; internally, pale, much indurated, and both cortical and medullary structures in a great measure disorganized, the former presenting the yellow striated appearance indicative of Bright's disease; the latter converted into a condensed, firm, yellow, indurated tissue, imparting much the same feel and appearance, when cut into, as incipient scirrhus. The organ was the normal size. Left kidney found occupying a position immediately above the fundus of the bladder, and below the bifurcation of the abdominal aorta, situated on the sacro-vertebral and sacro-iliac symphyses of the left side. It was about one-fourth smaller than the normal size, and of a somewhat triangular or oval shape, with a deep fissure in the external border. On laying it open, a cyst was found occupying the position of the medullary structure, and containing about a teaspoonful of turbid fluid, resembling a mixture of mucus and water, the walls apparently consisting of disorganized cortical tissue, about three-quarters of an inch thick, and of a similar appearance and consistence to the same portion of the right kidney. The right renal artery, two inches in length, given off at the bifurcation of the abdominal aorta. The left renal artery took its origin, distinct from the right, at the same place. Its length was three inches.

Remarks.—In this case, it may be of interest to consider whether the disease of the kidneys was in any respect produced or enhanced by the abnormal position of those organs. Several circumstances would tend to show that such was the case. As regards his history, the man was of temperate habits. The position of the left kidney left no doubt in my mind that a degree of pressure, greater or less, was produced by that viscus on the iliac vessels. The latter, too, I conceive, was subjected to a certain amount of compression, when the abdominal muscles were contracted; and this, though possibly not great, might cause congestion of the organs in the course of time. Its reduced size and flattened, oval shape, was in favour of this supposition. The right kidney occupied a position close to the anterior surface of the bodies of the vertebræ. It was not satisfactorily ascertained whether this organ rested on the vena cava. From its position relatively to the origin of its artery, however, I infer that such was the case.

It must always be of interest to find traces of any local causes, whether congenital malformation or otherwise, tending to produce organic changes usually attributable to a morbid condition of the blood itself; and should my conclusions be considered incorrect, the motive will, I trust, extenuate the error.

CASE OF DISEASE OF THE PANCREAS AND LIVER, ACCOMPANIED WITH FATTY DISCHARGE FROM THE BOWELS.

By Alfred Clark, Esq., M.R.C.S.E., L.A.C.,
Twickenham.

Harriet M——, aged fifty-seven, unmarried, the subject of the following case, had been a sufferer for some years before her last fatal attack, to constant derangements of the functions of the liver, and from time to time to attacks of gall-stones, many of which, no doubt, were passed, but never detected in the fæcal discharges.

About the middle of September, 1850, when away from home, she first began to notice in the urine (and at that time she supposed she passed it with her urine) masses of yellow, greasy-looking matter, in colour, consistence, and general appearance, exactly similar to yellow salt-butter, floating as small solid cakes (about the size of half-crowns) on the surface of the urine as it became cold. On her return home, which was very shortly afterwards, she came again under the care of Mr. Clark, senior, of Twickenham, and I had an opportunity of watching the case throughout. Her general health at the time was much deranged: the bowels very costive; liver inactive; suffering from frequent attacks of acute pain or spasms in the region of the liver, which we referred to her old complaint (gall-stones,) and which were relieved by the use of emetics, anodynes, hot fomentations, blue pill, and mild aperients.

About the beginning of October she first mentioned to us the presence of this fatty matter in the urine, and she was herself quite confident that it came from the bladder; but on making careful inquiries, we found that it was present not only in her water, but

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that all her motions contained more or less of it, and its presence in the urine was dependent on its passing away unconsciously from the rectum whenever she had a call to pass urine, although no fæcal matter passed at those times.

I gave a specimen of this fatty matter at this time to Dr. Arthur Hassall, who carefully examined it under the microscope, and found it to be perfectly structureless, and in fact could not tell it from a piece of butter. The quantity now voided (October 2nd) was about three or four ounces daily, as nearly as we could guess; the motions were costive, pale-coloured; (but no discoloration of the skin from absorbed bile: there was a deficiency in its secretion:) the motions very offensive; urine scanty and high-coloured; pulse 76, weak; she herself much emaciated, having been more or less ill for a year previously.

After a short time the matter oozed away continuously from the bowels, saturating her linen and bedclothes; it was of a most offensive odour, and quantities of it were passed with each motion, which had now become very fluid, pale-coloured, and offensive, the fatty matter floating to the surface, and forming a solid cake on cooling; the greatest quantity discharged at any time per diem must have amounted to eight or nine ounces.

During the first month of her illness, she took two or three times a week small doses of blue pill, or mercury-with-chalk, with mild aperients, and the bitter tonics; afterwards the iodide of potassium; but nothing appeared in any way to arrest the discharge of fat, nor did changes in her diet appear to have any effect upon it. Emaciation still continued, but she suffered no pain; in fact, she said she was freer from it than she had been for years.

Nov. 20th.—Dr. Chowne saw her in consultation. His opinion confirmed our own, that there was no doubt disease of the pancreas, whether of a malignant character or not was doubtful, together with a very inactive state of the liver, in all probability dependent on organic changes in its structure; and, more as a palliative than with any hopes of producing a cure, he recommended olive oil in two-drachm doses twice a day, with three grains of mercury-and-chalk every night. We fancied that the oil at first in some measure arrested the discharge, and we increased the dose to six drachms twice a-day, but in a few days it returned with all its former violence.

Dec. 5th.—Still in the same condition; no improvement whatever. In hopes of producing some assimilation of the food taken, (for her appetite was most inordinate,) we gave eight grains of ox-gall, twice or thrice a day, which had the effect of colouring her motions, but with no other visible benefit; she became gradually weaker and weaker, her mind giving way a few days before her death, which took place on the 20th of January, 1851.

On the 21st of January, eight hours after death, I made a post-mortem examination, assisted by Mr. Clark, Sen., of Twickenham, and Dr. Kershaw, of Kingston. The body was much emaciated; the legs anasarcous. On opening the chest, we found a large quantity of fluid, of a pale-red colour, in the cavities of both pleura, the pleura speckled over with minute spots of tuberculous-looking matter, in a state of softening; the lungs themselves perfectly healthy; no adhesions. Heart soft and flabby; pale-coloured; there was, in fact, fatty degeneration of it; and the pericardium contained about four ounces of fluid. On opening the cavity of the abdomen, we were surprised with the apparently perfectly healthy state of all the viscera; but on removing the omentum from the lower edge of the stomach, and drawing down the intestines, we brought into view a small tumour, about the size of a hen's egg, embedded in some fatty tissue, and situated between the left end of the stomach and the upper end of the spleen, and attached to the extremity of the pancreas. On cutting into this, we found it to be an encysted tumour, containing a mass of dark chocolate-brown substance, yellow in the centre, and glistening with small particles of cholesterine. The pancreas was completely altered in structure, being converted into a mass of nothing else but fatty tissue, with no traces of the original glandular structure. The whole of the liver, pancreas, duodenum, stomach, spleen, and tumour, were now removed from the body, and examined more in detail. The liver was pale, easily broke under the fingers, and presented the usual appearances of a nutmeg liver; gall-bladder very small; the coats much thinned in the posterior part; quite empty of bile, but contained two gall-stones of the size of horse-beans; bile-ducts empty; and the ducts in the substance of the liver contained but little bile; the whole liver being rather smaller than natural. The duodenum (perfectly healthy) was now slit open, and the opening of the ductus communis choledochus observed, and a probe being introduced, readily passed into the cavity of the gall-bladder; no opening for the pancreatic duct could be observed; the ductus communis choledochus, and its continuation the cystic duct, were now laid open, and beyond the opening into the duodenum were sufficiently large to admit the little finger; the pancreatic duct did not open into this canal, but where it should have opened into the duodenum, but external to it, we found the remains of the duct, containing in its canal, and completely embraced by it, a mass of calcareous matter, irregular in form, rough, and of a glistening white colour. On carefully cutting down on this, and examining the interior of the duct, we found that it terminated, just external to the duodenum, in a complete cul-de-sac, the canal being pervious towards the pancreas; there was no fluid in the duct; the mass of calcareous matter, consisting in all probability of carbonate and phosphate of lime, had most likely been formed in the pancreas, carried by its duct to its extremity, had failed in passing into the duodenum, and, increasing in size, at last had completely obliterated the duct; during which time, the pancreas, failing in getting rid of its secretion, had been gradually undergoing a change in its structure, and at last was converted into the fatty mass which it presented to us at the post-mortem examination. Whether the liver had acted at all during the last months of her life, is doubtful. The gall-bladder was hardly in the slightest degree stained with bile, nor were any of the ducts. The intestines generally quite healthy; the kidneys and the uterus healthy; the right ovary diseased, enlarged, and connected with it a small cyst, about the size of an orange, containing a straw-coloured fluid.

Remarks.—The foregoing case is interesting, I think, as illustrating, in a very marked manner, the connexion of disease of the pancreas with fatty discharge from the bowels; but in this case, as in all others reported, there was an evident deficiency of bile; but the generally healthy state of the other viscera prove that the presence of this fatty matter is dependent on absence of the pancreatic fluid, together with deficient supply of the biliary secretion; though in what way this deficiency acts in determining the secretion or conversion of other matters into this fatty substance, it is impossible to say.

Dr. Bright, in the eighteenth volume of the *Medico-Chirurgical Transactions*, reports several cases, in all of which there was decided malignant disease of the pancreas, and also of the duodenum, and from a general consideration of all his cases, arrives at the

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conclusion that, as regards the symptom of fatty discharge, you must have for its production—"Disease, probably malignant, of that part of the pancreas nearest to the duodenum, and also ulceration of the duodenum itself," these two conditions being peculiar to all his cases; but there also appears to have been a deficiency of the biliary secretion.

He, Dr. Bright, does not affect to decide whence the peculiar fatty matter is derived—"whether it is to be considered as a vitiated secretion from natural structures, which must here be chiefly mucous; or as a discharge from the diseased and ulcerated parts; or as the product of defective digestion of alimentary matter, depending on the imperfect supply or irregular mixture of the biliary and pancreatic or other secretions; or on the perverted and impeded action of the duodenum."

He concludes his observations on the disease in question with the following paragraph:—

"All of those in which the oily evacuations have been observed have been cases of decided malignant, and, as far as the pancreas is concerned, we might say, of schirrous disease. Now it is a fact which I have observed in several cases, that the bile is very apt to undergo that change which leads to the deposit of concretions of adipocire in the gall bladder, in patients labouring under schirrus, as females with schirrous mamma, for instance, where the disease either has or has not attacked internal organs; and I think it arises as a fair question, therefore, whether the peculiar appearances of the alimentary discharges may not depend on the same condition, be it what it may, which leads to the unnatural deposit in the gall-bladder; and should this prove to be the case, the symptom would be diagnostic of the nature of the diseased action, rather than of its effects."

I think the history of the case just reported will decide that it is not absolutely necessary that there should be schirrous disease, either of the pancreas or of the duodenum, for the production of this fatty matter.

In the same volume is a case reported by Mr. Lloyd, in which there was a cancerous state of the duodenum, which had nearly obliterated the canal, and completely obstructed the duct of the pancreas, as well as that of the liver. The nature of the fatty discharge was precisely similar to that taken from our patient, a specimen of which I showed to Mr. Lloyd.

Dr. Elliotson reports also several cases in the same volume, some from his own practice, others from different authors, and one in which the fat was supposed to pass from the bladder; but may not the patient have been deceived in this respect, in the same way as mine was?

From a comparison of all his cases, he arrives at no certain conclusion as to the source of the discharge, but refers it to the liver or intestines, and considers it a necessary condition that there should be disease in the canal, in the liver, and the pancreas, and appears to be rather inclined, from the unctuous nature of most biliary secretions, to refer it to the liver.

He does not consider "organic disease of either the alimentary canal, or any other part," as being necessary for the production of the disease, the truth of which opinion the case just reported tends to confirm.

ON A POINT OF UTERINE PATHOLOGY.

By WALTER C. DENDY, Esq., M.R.C.S.

THE physiology of the placenta is a subject of the highest interest, both with reference to fœtal development and to maternal welfare. To its abnormal or unhealthy condition may be referred many of those deranged actions which often prove so detrimental and perilous to the mother, especially during the progress of parturition.

The morbid states of its vascular portion will constantly interfere with the economy of the fœtus, especially with its respiratory apparatus and its nutrition: its prosperous development will thus be at once checked, and itself, and subsequently its mother, be placed in difficulty or danger.

It is, however, to the maternal or cellular portion of the placenta that I now briefly refer, and this especially regarding the parturient uterus.

The microscope will gradually unfold the morbid anatomy of the placenta, the various derangements which its cellular tissue is undergoing, and will probably illustrate the influence which chronic inflammation, disintegration of coagula, formation of cyst, &c., possess over the normal connexion of the ovum with the uterus. I do not here, however, at present enter into the special pathology of the uterine and placental cells, or of the decidua, so intimately concerned in placental adhesion. There are, however, two conditions of the parturient uterus which, I believe, are very intimately associated with placental pathology: I allude to protracted or inefficient uterine efforts, to which the term *lingering labour* has been applied; and the inverted or irregular action of the uterine fibres subsequent to delivery.

If the placental cells be obstructed by fatty or other degeneration, a low organic power is induced, the fœtus is of course imperfectly nourished, and it will probably dwindle, or be prematurely dislodged from the uterine attachments.

For this result, however, the tissues must be *extensively* disorganized; for there will ensue a degree of vicarious action in the healthy placental lobules in aid of those which are diseased.

To induce, however, those unhealthy states to which I have alluded, a morbid change in one or two lobules may be sufficient, especially if this contamination extend to the tissue or lining membrane of the uterus.

We know that whenever a tissue is inflamed or diseased, there will often be a sort of instinctive reluctance to motion—a dread of its consequence; as if the organ were aware of the pain or uneasiness which motion would induce: hence the organic apathy and the suspension of action. The degeneration or disease of the cellular portion of the placenta, must constantly be productive of some morbid change in those tissues intimately associated with it, and *vice versâ*: one of these changes being subacute inflammatory action and adventitious adhesion.

Now we are all aware that systematic or constitutional debility in the mother, may often be the source of inefficient muscular action, as well as of insufficient fœtal nutrition, by which labour may either be protracted or prematurely induced; but, from the frequent association of irregular uterine action with placental derangement, I believe they may more often be considered as cause and effect than we have yet been able to prove.

The last three cases of morbidly adherent placenta which have occurred to me have been in ladies who have *frequently* aborted, and in whom labours have almost invariably been lingering, and in two of which hour-glass contraction has been combined with morbid adhesion. The last case of this irregular contraction occurred to me three weeks since, and has revived the reflections that have led to these brief propositions.

Mrs. L——, a lady of fair complexion, yet of very firm and healthy constitution, who has miscarried three times, and in whom every complete labour has been marked by some unusual circumstances, had

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een indisposed from Friday night until the following Tuesday; the membranes had suddenly yielded without effort. In this interval there was no actual labour pain: the expression of the patient being that she felt very *odd and queer*, and experienced very unusual sensations in the abdomen. On Tuesday at noon, uterine effort supervened, and late in the evening the child was born. The extraction of the feet was, however, even difficult; for although, for several reasons, I allowed the uterus to expel its contents without much contractile effort of my own, I was obliged to relieve the feet from a very firm contraction, which girt the ankles with extreme force. The funis was very friable, and could have been easily torn by traction; and as I at once discovered a close hour-glass contraction, I directly proceeded to overcome it. On passing the hand into the superior cavity, the wrist was girt by an excess of power, which those who have been subjected to this grasp will not soon forget. The placenta was firmly adherent, and required very careful detachment, my fingers being constantly *enmeshed*, as it were, by membranous bands. The lady recovered without any morbid symptom, two very small placental lobuli passing on the fourth day, somewhat decomposed.

The character of pains in lingering labour is very indicative of abnormal action, deficient or irregular; and it is probable, I think, that the fibres about the fundus uteri, where morbid adhesion equally occurs, are perfectly apathetic, when the unnatural labour depends on the morbid condition of the cells to which I have alluded, for it occurs very often in women whose robust frames and constitutions would promise vigorous and efficient uterine action.

In those cases which are of a nervous or asthenic character, occurring in women of weak or lax fibre, a full dose of opium given to induce repose will often excite efficient labour pains, by controlling irregular action; but where a morbid state of the tissues themselves exists, opium possesses not this influence.

When the fœtus is expelled from a uterus thus morbidly associated, the same irregularity will be displayed. The *innervation* which would otherwise be diffused over the whole fibrous tissue of the uterus, is *concentrated* in those portions which still retain their power and energy; these act with undue force, and hence we may explain the almost Titanic resistance which the ring offers to our efforts to introduce the hand.

Hour-glass contraction has often been referred to injudicious traction of the child in the absence of uterine pains. This officiousness is far more frequently the cause rather of inertness, of inefficient uterine contraction than the grasping ring of hour-glass contraction, and we know that some of the most obstinate cares have occurred, not only where the birth has been left solely to natural effort, but even the expulsion of the child from the womb.

I have written these brief remarks chiefly with a view of drawing attention to the pathology of the uterine decidua.

THE MODERN ARAB PRACTITIONERS.—Rhazes and Avicenna have left but very indifferent successors in their country, and great degeneracy has taken place since their time. But a new life is apparently about to be imparted to medicine, at least among the Arabs of Algeria, as we perceive by the French medical journals, that the son of an Arab Doctor of Constantina is pursuing his medical studies at Paris in a very creditable manner.

PORTRAITS AND BIOGRAPHIES OF DISTINGUISHED FOREIGNERS.

The Biography of
BARON BERZELIUS, M.D., PH.D.,

LATE PROFESSOR OF CHEMISTRY IN THE UNIVERSITY OF STOCKHOLM, ETC.

BY DR. SHERIDAN MUSPRATT, F.R.S.E.,

Professor of the Liverpool College of Chemistry, etc.

IN an age which has produced a greater number of celebrated chemists than of any other scientific men, BERZELIUS stands out as a star of the first magnitude; and it is to the honour of Sweden, that he is only one of the number of her sons whom the cultivation of natural sciences has raised from poverty and obscurity to the highest dignities bestowed by the state. Of humble parentage, and commencing life with limited resources, the successful cultivation of chemistry procured for him that position and consideration in his own country which the man of science has a right to claim and which is the privilege of sovereigns and states to bestow.

It is somewhat strange that the great philosopher, although highly esteemed, and almost adored in many places in Germany, France, and Sweden, should have met with so little attention and so few marks of respect in enlightened England! There are many in this country who highly appreciate the man, and accord with Liebig's estimate of his character; nevertheless, I am sorry to say that the greater portion of my countrymen are totally ignorant of Berzelius and his works. How can this be wondered at when the nephew of a London baronet asked me if he was a good lecturer on elocution! "Indifference to the fate of greatness is the surest mark of a degraded state of mind." This indifference seems to be exhibited in Great Britain more than in most countries, as my quotation proves:—In England, merit unheralded wins no victory; unpatronized, gains no attention: the soldiers win the battle, but the general gets the fame. If genius be struggling and starving, it may struggle and starve; but if it seems to have no need of the world, the world is at its feet.

JÖNS JACOB BERZELIUS was born at Linköping, on the 29th of August, 1779. His father kept the parish school in the village where the illustrious chemist first saw the light. In 1796 he studied medicine and chemistry at Upsala, and as early as 1799 he undertook his first great subject—namely, the analysis of the different springs of Medivi, a celebrated watering place. He communicated his results in the first of his academical treatises in 1800, and in 1801 he was nominated a licentiate of the Academy. The next was his physical investigation, the effects of galvanism on organic bodies, and for this dissertation he obtained, in 1804, the degree of M.D. By this time he had so distinguished himself by his chemical researches that a new place was formed for him in the Academy, where he became junior Professor of Chemistry and Pharmacy, commencing his lectures to large audiences.

In 1803, the year in which he discovered cerium, he was appointed Chemist to Wemer's factory for artificial mineral waters, which his chemical skill soon rendered most flourishing. He was teacher in the Carlberg military school in 1806, and principal Professor of Chemistry and Pharmacy in the medical school, in 1807. In the same year, with several of his colleagues he founded the association for medical physicians; a year after, he was made Fellow of the

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Stockholm Academy, of which he was elected President in 1810, and an annual sum was awarded for him to carry out his scientific researches.

Before entering upon the discoveries and additions which Berzelius has contributed to practical chemistry, organic and inorganic, it may be well to descant upon his theories of chemical phenomena, constantly occurring in various operations. The Stöchiometrical theory Berzelius has greatly extended by his explanation of the combining proportions of bodies, and of the manner in which such combinations are effected. He, like Dumas, determined the atomic weights of most bodies; and, in 1807, he thoroughly investigated the order of the combination of elements, as broached in the old works of Richter, and thereby laid the foundation of the atomic theory used on the continent. Decomposition of bodies by means of contact with a solid or liquid body, which suffers no change itself, is by Berzelius attributed to what he calls *catalytic action*. Of all the dogmas advanced on the electro-chemical theory, Berzelius' views and explanations in 1803 are the most consecutive. In his investigation he showed that the *less intimate* combinations—*e.g.*, solutions of salts in water—must be regarded as the result of specific attraction, the solid particles diffusing themselves throughout the liquid till each is surrounded with equal numbers of atoms of liquid. The *more intimate* combinations he distinguishes as the really chemical or electro-chemical combinations: they result, not from affinity between their ponderable elements, but from the electricity attached to those elements. Electricity engrossed much of this philosopher's time in this year; and in the course of his manipulations he noticed many very interesting facts. He objected to Faraday's theory, that equal numbers of atoms of liquids required equal quantities of electricity to decompose them; and his arguments to prove the reverse of this axiom are comprehensive and forcible.

Berzelius worked with Hesinger also in 1803, upon the electro-chemical theory, and the decomposition of salts by galvanic electricity. The oxygen and haloid salts of ammonia were particularly examined by them. In the course of their studies, they showed that, by adopting the compound NH_4 as the basyle of ammonia, the necessity of employing water in the formula, where the basyle is represented as NH_3, is obviated. Experiment coincided with these views, for in every oxysalt of ammonia, according to the old system of equation, they proved that oxygen and hydrogen—water—existed in the exact proportion to form an oxide with the supposed metal ammonium; and in the haloid salts, the hydrogen, combined with the electro-negative element, is sufficient to convert the ammonia of the old formulæ into the compound metal ammonium.

In 1808 he prosecuted the study of the existence of the compound metal ammonium, which led him to the discovery of the *ammon-amalgam*. He remarked, that if an electric current be passed through ammonia, mercury forming the negative pole, no hydrogen is evolved; the mercury, however, increases many times in bulk, and the enlarged mass possesses the metallic lustre and other characteristics of an amalgam.

The organic department of the science has been advanced by Berzelius, and more especially the physiological. His researches in 1806, on the blood, bile, and urine, are laudable for their acutenes, sound reasoning, and accuracy of manipulation. He proved, by a series of ingenious processes, that the *bile* was not so simple in its constitution as Demarçay supposed; for he obtained from it a number of substances differing in their properties. When sulphuric acid is mixed with an alcoholic extract of the bile, no precipitate is formed for a considerable time; and thus he showed that the substances which exist in the bile, combined with soda, are completely soluble in water, and not until the compound changes does a precipitate of *cholesteric acid* occur. By acting on this precipitate with ether, he removed from it a resin that possessed acid properties, and from its baryta salt he demonstrated it to be a mixture of two distinct resins—*fellic* and *cholinic* acids, and the matter insoluble in ether to be the true *bilin*. It is of a bitter taste, possesses no acid properties, is soluble in alcohol in all proportions, insoluble in ether; when heated, it softens and burns like resin; acids and alkalies rapidly decompose its aqueous solution, especially if heated, into a variety of substances, according as the degree of alteration is more or less advanced. Berzelius states, that if the bile be kept for some time, it undergoes a peculiar eremacausis, giving rise to two white earthy powders, slightly soluble in water,—fellanic and cholanic acids; the former fusible, the latter infusible. Dr. Strecker has recently investigated the bile, and owing to the late improvements in organic analysis, his results are the most satisfactory with regard to the real nature of this puzzling secretion. As the number is so great of the organic and inorganic substances in the urine, its nature has at all times been an object of interest to the physician and to the chemist.

Berzelius was the first to determine accurately its constitution; thus establishing a correct basis of comparison for this secretion in the various conditions of disease. He found its specific gravity to vary from 1016 to 1030. Milk was a subject which absorbed much of the professor's attention.

On the theory of salts, Berzelius has done much to simplify the nature of decompositions which, previous to his investigations, were but very imperfectly understood. Salts are, according to this chemist, of two classes, the *amphid* and the *haloid*. The amphid are, the oxygen, the sulphur, the selenium and the tellurium salts; and he considers the oxygen, sulphur, selenium, and tellurium, in such compounds, *amphigenous*, or producers of acids and bases. The haloids are the compounds of fluorine, chlorine, iodine, bromine, and cyanogen with metals; he terms the radicals in these salts *salifiers*. He worked on carbon, hydrogen, boron, and boracic acid; distinguished some of their most remarkable properties and atomic weight. Phosphorus he studied minutely, and found that the *red* modification of phosphorus—previously regarded as phosphoric oxide—was the pure element in an allotropic state. Very efficient modes for the preparation of phosphorus and phosphoric acids were discovered by him; he likewise showed the composition of these acids and their more important combinations with bases which he very elaborately determined. The compounds of sulphur with oxygen, boron, carbon, and hydrogen, were the subject of one of his scientific examinations; moreover, he studied the alkaline sulphides and the sulphides of the heavy metals, which he analysed with great care. He discovered sulphide of carbon in 1813. We are indebted to Berzelius for the discovery of selenium in 1818, and the process for obtaining it. He noticed in a sulphuric acid manufactory, where the iron pyrites of Fahlun were employed, that a reddish-brown body deposited on the bottom of the chambers. Several experiments were performed on this substance, during which he ascertained that when it was treated on charcoal before the blowpipe, a peculiar odour was evolved like decaying horse-radish; from this re-action he supposed that it contained some unknown body, a supposition which he subsequently confirmed, by the isolation of the element *selenium*. He studied the compounds of selenium with oxygen, observing their chief properties and composition. He worked on silicium in 1823, described a

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method for obtaining it in a pure state, determined its atomic weight, its leading properties, and the combinations it formed with oxygen, fluorine, &c. In 1824 he discovered the metal zirconium, and in the same year, chloride of boron; he extensively investigated chlorine and its various combinations with other elements. Berzelius was the first to introduce chlorine into analytical chemistry as an agent to determine the quantity of many metals—volatile chlorides being formed. Fluorine and its compounds were also studied by Berzelius in the above year, which added considerably to our knowledge of those substances. Hydrofluoric acid was introduced by him into analytical chemistry for the determination of alkalies in mineral analysis. Tantalum and its combinations were investigated by him in the above year. He described a method for preparing the pure metal, likewise he discovered a great number of its combinations which hitherto were unknown. In like manner he examined the principal combinations of tungsten with other bodies, and of tungstic acid with bases, all of which he analyzed. He worked on platinum in 1828, on tellurium in 1831 and 1833, the leading combinations of which he very elaboratory assayed. In fine, to give an estimate of Berzelius' labours would require that we should go through the whole range of chemistry; for he has examined every subject, and has been instrumental in augmenting the knowledge of all metals and their combinations. I had lately a very good opportunity of judging of the truthfulness of Berzelius' results when investigating selenious acid and its salts. It astonished me exceedingly, how accurate were the remarks and analysis of this great man. He must have felt an inward pride when giving the results of his labours to the world, feeling assured that they would go down to posterity unaltered and unalterable. The secret lay in this,—he never published an analysis without being thoroughly convinced of its veracity. The sulphides of phosphorus were particularly examined a short time previous to his death. From those investigations it is obvious that phosphorus forms with sulphur a series of compounds precisely analogous to phosphoric oxide, hypophosphorous acid, phosphorous acid, and phosphoric acid.

Berzelius was unquestionably a great and extraordinary man; he became so by indomitable industry and inexhaustible patience. He never displayed any sudden bursts of genius, for his mind was in constant equable action. His greatness might be said to arise from an assemblage of results. His conversation was sprightly and natural, and his manners sufficiently bland for one who commenced his career as the drudging apprentice of Afzelius, and who ultimately was the constant companion of his monarch. The likeness from which the accompanying sketch is taken was presented to me by a friend of *the* chemist of Sweden. He told me it gave an excellent idea of the Professor. He was about the middle height. The face is plain, and there is nothing in it at all indicative of transcendent talents. I should infer from the head that the original had been a man of a generous nature, great perception, and plenty of firmness, cautiousness, and conscientiousness. The badges of honour from King Charles John, and other monarchs, are numerous—the outward signs of the respect in which he was held. I have mentioned in the former part of this memoir his perseverance and great energy, which, indeed, are often acquired habits, and not natural gifts.

He may certainly be designated the greatest analytical chemist of his age—*i. e.*, he added more data to the science than any other of his profession, although as a genius he ranks inferior to Lavoisier, Davy, Dumas, and Liebig. His perceptions were remarkable, and his investigations well disciplined. His private character, from all I can learn, was almost faultless, and he was endowed with every quality which could attract admiration and esteem, making him the idol of all who knew him. He was most simple and unassuming in his manner, and remarkable for his *bonhommie* and kindness. He was an admirable manipulator, and did everything, even the most trifling, with extraordinary care and neatness. He was not fond of society; his science and his laboratory took up most of his time and attention. He had a few intimate friends, who were often with him during his leisure hours, when they enjoyed the free and unstudied conversation of an easy and intelligent associate, while they had at all times the proud and inward assurance that he was a being upon whose perfect honour and generosity they might rely with the most implicit confidence. It has been said of him, as of others of his class, that he was jealous of any competitor. He evidently knew his own superiority, and naturally looked with suspicion upon any new "light;" but he was only jealous for the sake of science: he would sacrifice anything for her. "He knew how opposed even his own fertile experience was to those extravagant and imaginary successes with which the sanguine mind loves to amuse itself."

It is worthy of note, that Berzelius never pronounced any opinions, unless such were *supported by facts* obtained by *long experience*, since he considered a theoretical view, if once acknowledged by science, to be final, unless shaken by overwhelming proofs. His adherence to this axiom exposed him to the reproach of some of his contemporaries who were more free in advancing their opinions; and notwithstanding that Berzelius accounted some of these as very ingenious, yet he did not receive them, preferring to abide by the old doctrine until results should place the new on a firmer basis. This over-cautiousness of the eminent Swede produced one good result for our science—namely, no theoretical idea could be introduced with impunity when there was such a powerful chemical authority to discuss it in all its relations.

Although Dalton claims the merit of the atomic theory, yet, as I have previously stated, Berzelius was engaged in working up the almost forgotten works of Richter, who showed the regularity of the combining proportions of acids and bases, before Dr. Dalton's views were generally known. Furthermore, in treating of the atomic theory, Berzelius writes—"When we reflect, it is first evident that it must be of a mechanical nature; and what presents itself as the most probable idea, most conformable to experience, is, that bodies are composed of atoms or molecules which combine one with one, one with two, or three, four, five, &c.; and the laws of chemical proportions seem to result from this with such clearness and evidence, that it seems very singular why an idea so simple had not been adopted, and not even proposed before our days. As far as I know, the English philosopher, Mr. John Dalton, guided by the experiments of Bergman, Richter, Wenzel, Berthollet, Proust, and others, was the first person who endeavoured to establish that hypothesis. Sir Humphry Davy has lately assured us, that Mr. Higgins, in a book published in 1789, established the same hypothesis. I have not seen the work of Mr. Higgins, and can only notice the circumstances on the authority of Davy. There is every reason to believe that Higgins established the atomic theory, by well-chosen facts and mathematical demonstrations, long before Dalton. Higgins, in applying the system to the chemical theory of atomic combination, expressed by numbers the relative forces of attraction subsisting between the different kinds of ultimate particles and atoms of matter to each other,

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and which was the most important feature in the system." Men of science should not pass lightly over Higgins when discussing the most important discovery perhaps ever made. In awarding credit to Dalton, Richter, Wenzel, and others, for symbolical improvements on the atomic theory, they should not leave Higgins in oblivion, but should rather remember that the atomic theory owes to Higgins what chloroform does to Dumas, and I believe that sooner or later justice will overcome all obstacles and prejudices in favor of the ingenious Irishman.

From his laboratory emanated many of the best chemists of the present day, such as Mitscherlich, Gmelin, Henry and Gustavus Rose, Wöhler, Magnus, Arfvedson, Mosander, and Anderson. The last-named informs me that the baron's laboratory consisted of a *suite* of three rooms in the *entresole* of the Swedish Academy, one of which was his library. The rooms were *small*, but contained a very fine collection of apparatus and specimens. The visitor had nothing to fear from emanations in the laboratory, which, in most cases, affect so sensibly the organs of respiration. Here all the obnoxious vapours were carried off by a most efficient system of ventilation; and even if any operation were in progress, it might be approached without danger. A mercury trough was carefully adjusted near the window, to the right, which reflected the light brilliantly. Further on was a small porcelain table, with raised edges, on which were some glass apparatus for carrying on experiments. The blow-pipe and its large lamp was the next to attract the beholder; then the sand-bath. It was in vain to look in this laboratory for a brick or stone furnace, such not being essential to the prosecution of the delicate analyses which were therein completed. A hearth raised about three feet from the ground, and covered with a hood for carrying off vapours, was the apparatus employed. Johnstone states, that on this hearth was placed a small sand-bath, heated by charcoal, and a small iron furnace, with holes for receiving tubes, retorts, &c. In the second apartment, the first object to engage attention was a glass case upon a table, in which was the balance. How great is the light which this fragile and simple instrument has radiated on natural sciences! How numerous are the phenomena which are explained by its agency, and the hidden truths it has revealed! Who can count the discussions which it has terminated—the hypotheses which it has destroyed! Who could have believed, in past times, that the determination of abstract truths, and the development of the laws of Nature, would be due to the oscillations of this instrument? But examine this balance with attention, for it has rendered great service to science, and the modifications which have been made in it are of importance. The method for raising and maintaining in repose the beam and the pans is due to Gahn, whose skill in such work was well known. Weights, the exact counterpoise of all the crucibles and small platinum vessels of the laboratory, are nicely adjusted in a box, so that each vessel may be readily tared. Around this room are placed, in drawers or glass cases, divers apparatus and chemical preparations, in perfect order; and near the window is a table arranged for operations with the blow-pipe, on which Berzelius has written an excellent treatise. Berzelius worked very diligently for twelve or fourteen hours daily. He frequently ceased experimenting for months together, being engaged in preparing the results of his former investigations for the scientific world. If, however, he met with any dubious subject in the course of his writing, he re-established himself in his laboratory, and did not quit it until he obtained the desired information, and then returned to his pen.

The style of his writings exhibit great freedom, force, and beauty.

Rose requested me to meet this distinguished person when he was last in Berlin. I shall ever regret not being able to accept the doctor's invitation, but I have the satisfaction of possessing a most flattering note from Berzelius relative to my several discoveries, moreover, he incorporated many of my investigations in his *Jahresbericht*—the highest honour that could, in my opinion, be paid by a foreigner to an English fellow-labourer. To be praised or appreciated in another land "sounds like the distant plaudits of posterity." At the coronation of King Charles John, in 1818, he received a title of nobility, with permission to retain his name, most unusual in his country. He was elected secretary of the Stockholm Academy of Sciences in the same year, which office he filled till his death. This appointment only brought him in the paltry sum of £120 per annum. In 1832 he resigned the professorship of the medical school, after a servitude of thirty years, to which he was nominated honorary professor by the King, and on the occasion of his marriage his royal patron bestowed on him the title of "Freiher," equivalent to our viscount. The following interesting anecdote, relative to the matrimonial alliance of Berzelius, was related to me by a lady friend of his, and the sister-in-law of his successor, Professor Mosander, the discoverer of didymium, erbium, terbium, &c.:—Berzelius was on very intimate terms with Poppins, and was in the habit of spending his Christmas-eves at the president's residence. It was on one of these occasions that he said, "Ah! my good friend, it is on evenings like these, when I see you surrounded by your wife and children, that I regret being a bachelor." "Why," replied the president, "it is your own fault, Berzelius; and it is not *too late* yet to repair." On this Berzelius walked up to Elizabeth, the eldest daughter, and said, "Betty, do you hear what your father says, *it is not too* LATE *yet*. Will you marry me?" "Of course," she said, thinking he was as usual, joking. He tried, however, to persuade her he was in earnest, but she gave it no further consideration until spring, when Berzelius asked her if she would answer him now, as she had plenty of time to consider. "Answer you on what?" "On the question I put to you on Christmas eve—*whether you would marry me*." She said "she thought it was a mere joke, but would now begin to think about it." Six weeks later he obtained her consent. He was accordingly married, in 1835, to this lady, who was twenty-eight years his junior. There were no children to inherit his world-renowned name.

During the winter sessions he sometimes had literary *soirees*, to which all scientific men, and any of his friends who wished to attend them, had free *entrée*. After his marriage ladies were admitted. They were visited by the leading persons of Stockholm: even the present King of Sweden frequently honoured them by his presence.

At these *soirees*, as well as in the laboratory, Berzelius took a pleasure in demonstrating the mysteries of science, with the view of making them comprehensive and attractive to all. He took particular delight in any one anxious to learn the interesting results of chemistry.

Everything touched by the illustrious Swede was improved; and I might say of him, without being contradicted, that he was the most indefatigable worker, and greatest discoverer, that ever appeared in the arcana of science. His publications are numerous, the most celebrated volumes being his "Manual of Chemistry," his "Jahresbericht:" *i. e.*, his "Annual Report," for twenty-two years, on the progress of physical science, and "History of Chemistry," monuments

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of research and skill. The subjoined interesting extracts from letters written by a great friend of the professor during the illness which terminated in his death, are worthy of a place here; every little incident connected with the life of eminent individuals must be instructive.

"November 14th, 1847.—I fear that we will soon have to mourn in this house our great, our dear Berzelius. Day by day he is getting worse, and although at intervals he seems somewhat better, yet the physicians are of opinion that the last sands of his life-glass are fast disappearing.

"At the seat of his father-in-law, at Kjevinge, he has just had a severe attack of gout, or rheumatism, in the spine. He became so sensible to the least pressure on his body, that it was impossible to convey him to town in a carriage; a steamer was therefore taken for this purpose.

"The last time I saw him he was enduring great bodily pains, but there was no immediate danger. Since then, however, the pains have been increasing, and are at times excruciating. He can obtain rest only by taking opium. The lower extremities are completely paralyzed. Two days ago Mosander talked with the dear patient, on which day we had a faint hope of his recovery; and it appears that Berzelius had heard this, as he assured Mosander that he would be content with the loss of his lower limbs provided he was spared his life, and the use of his head and hands. But now, alas! that will never be; perhaps ere this reaches you, the great spirit of our friend may have fled to the unknown land! Young Struve, the son of the astronomer, is very sad about Berzelius, as he came here for the sole purpose of working in his laboratory, and under the direction of the king of chemistry.

"September, 1848.—You ask me how the great man is getting on. I hope, well; but he is no longer on earth; he has begun his voyage on those unknown shores. Yes! Berzelius is no more! August the 7th, at two o'clock in the morning, his spirit was released. I visited him a few days before his final dissolution, but was only permitted to look at him through a door half closed."

The professor's income was never large, and for the last few years of his life, it did not exceed 250*l.* per annum. Unless a chemist has an independent fortune, or, like Wollaston, makes a happy discovery that can immediately be turned to practical advantage, poverty will ever stare him in the face; and he must rest content with the true saying of the greatest of poets and of men—"Genius is its own exceeding great reward."

A fine cenotaph has been erected to the memory of Berzelius chiefly at the king's expense; and the house in which he breathed his last is looked upon as one of the most precious treasures of Sweden. How true it is, that even the most common objects are consecrated when associated with the reminiscence of the great.

THE HOSPITAL FOR SICK CHILDREN IN LONDON.—As it is extremely likely that an hospital for children will before long be established in London, we would direct the attention of those who are interested in the subject, to a very useful addition which was made a few years ago to the Children's Hospital at Paris. At the suggestion of Drs. Guersant, Bandelocque, and others, a regular school for gymnastic exercises was annexed to the hospital. Here those children who are in a convalescent state, and such other little patients as are affected with certain diseases of the bones, may enter upon various kinds of gymnastic exercises.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, et dissectionum historias, tum aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.*, lib. 14. Præmium.

ST. BARTHOLOMEW'S HOSPITAL.

Popliteal Aneurism; Pressure; Deligation of the Femoral Artery; Recovery.

(Under the care of Mr. LAWRENCE.)

SOME of our readers may perhaps think that differences of opinion as to the most advisable method of treating aneurism, situated in the limbs, are confined to this country. This would be an error, for discussions of a very animated nature are taking place in France and Italy as to the merits of galvano-puncture in the treatment of aneurism. We are not aware that any trials of that kind have, of late, been made in England, but venture to think that some attention might be paid to this method, for if found thoroughly wanting, it might easily be abandoned. There has been a tendency of late to extend the therapeutical use of galvanism, and it would appear likely that the wonderful fluid is destined to play a greater part in medicine and surgery than is generally anticipated.

As to the treatment of aneurism, we are still, in this country, wavering between deligation and compression. The uncertainty is, however, fast vanishing, as our Irish brethren, who strenuously support compression, (and among whom Dr. Bellingham holds a conspicuous place as the first and most zealous advocate of the method,) are pursuing their labours with the most praiseworthy constancy. We shall probably very soon have an opportunity of largely alluding to compression, since our hospital surgeons are showing themselves perfectly unprejudiced, and inclined to give this mode of treatment a fair trial. We shall then be materially aided in our task by the interesting communications lately made by Dr. Bellingham to the Medico-Chirurgical Society of London.

It is, however, in the meanwhile, our duty minutely to record the cases where the deligation of the artery has been successfully resorted to, especially those in which compression was tried and discontinued. Such records will be the more useful, as the statistics which have from time to time been published on the subject are not encouraging at all. We find, for instance, from tables drawn up by Mr. Horni, that out of 204 cases of deligation of the femoral artery, there were 50 deaths, and six amputations necessitated by gangrene of the limb. Out of the said 204 cases, the artery was tied 188 times, to arrest the progress of aneurism. Here we find 46 deaths, 24 cases of secondary hæmorrhage, 16 of inflammation and suppuration of the sac, and 31 of gangrene. It will be perceived that this table, on close inspection, presents results of a less discouraging description than would at first appear. It is plain that out of 188 patients suffering from aneurism, 142 recovered; and though the recovery in such cases where gangrene occurred is not so thoroughly satisfactory as when no such accident happens, yet the danger inherent to the existence of aneurism is removed, and the patient has a fair chance of living many years in comparative comfort.

We were extremely glad to see the following case take a favourable turn, as we had a short time previously witnessed unpleasant results arising from the deligation of arteries.

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William J——, aged thirty-one years, following the occupation of waterman, married, of light complexion, short stature, and habitual good health, was admitted into Bentley ward, January 27, 1851, under the care of Mr. Lawrence. The patient states that his habits have generally been temperate, that he has not overworked himself, and that the only ailment he had had to complain of was an occasional pain in the chest. Seven months before admission, he noticed in the right popliteal space a tumour of the size of a marble which pulsated visibly; the circumstance caused him, however, no alarm, and he was content to rub the tumour with turpentine, without seeking for medical aid. The tumour, however, gradually increased in size, without giving intense pain, and the patient was enabled to attend to his occupation up to two days before admission.

When examined, the tumour was found to be of the size of an orange, situated in the centre of the popliteal space, and presenting very strong pulsations. The hand applied over the swelling received the sensation of a distinct thrill, and a loud bruit was heard on the application of the stethoscope. The patient did not complain of a great amount of pain, neither in the tumour nor in the leg, and the rest of the arterial system seemed in a sound condition.

Mr. Lawrence resolved to try compression of the femoral artery in order to arrest the progress of the disease, and on the 31st of January, four days after admission, a compressing apparatus was applied. It was the usual clamp-shaped instrument, provided with two pads connected with the steel rings (which encircled the thigh without compressing it) by screws of spring materials, the upper part of the screws working as ball and socket. One of the pads was made to press upon the artery in the groin, the other in Scarpa's space, and they were intended to act alternately.

By the use of this instrument, the pulsations of the tumour were completely arrested; the patient, however, stated that the pressure gave him intense pain, and that he should probably not be able to bear the compression long. Nor did his feelings deceive him, for he could endure the apparatus but two hours, at the end of which time it was removed. On the 4th of February, four days after the first application of pressure, Mr. Lawrence proceeded to place a ligature on the femoral artery, the patient having been rendered insensible by chloroform. The artery was tied in Scarpa's space in the usual manner. The pulsations of the tumour ceased immediately, and have never returned.

No untoward symptoms whatsoever marked the progress of the case, and so thoroughly did the collateral circulation become established in a short time, that the limb did not sensibly lose any of its natural temperature, though no cotton wool nor flannel wrappings were used. The patient did not complain of pain in the leg, and he seemed to experience no uneasiness but what might be expected from a common wound in the thigh.

Ten days after the deligation of the vessel there was a little numbness in the foot; the latter was, however, not cold, and the wound in the thigh looked well. The tumour in the ham had now become quite hard; there was no thrill or pulsation to be noticed in it, though the size had not materially decreased. The swelling gradually diminished however, the patient progressed very satisfactorily, and on the 28th of March, about seven months after the deligation of the femoral artery, he was discharged in good condition, the tumour having decreased to the size of a pigeon's egg, and being of very firm consistence.

The only complaint the man had made during the latter days of his stay in the hospital was of tightness and pain in the chest, unaccompanied, however, by shortness of breath. The stethoscope applied to the region of the heart did not afford any bruit or abnormal sound about that viscus.

The failure of pressure in this case seems to point to a more than ordinary irritability of the patient, or to the compression of a nerve or nerves by the pad placed upon the artery. Whatever the cause may be, it shows that this method of treatment, (in common with many others,) though extremely valuable, and likely, as Mr. Skey states in his work on Surgery, to have a "useful if not a brilliant career," is not universally applicable. Mr. Lawrence's case will tend to show that the various untoward symptoms which sometimes follow the deligation of an artery, can hardly be prevented by the use of external warmth to the limb; but that the temperature is kept up more or less according to the amount of energy displayed by the vessels which are to carry on the collateral circulation.

Cases of Intestinal Obstruction.

(Under the care of Dr. Hue and Dr. Roupell.)

It must be confessed that among the cases which present difficulties as to diagnosis and treatment, obstinate constipation holds a prominent rank. The causes which may prevent the free onward course of the fæculent matter are so various, and their characteristic symptoms so little defined, that it is seldom possible to ascertain the nature of the obstacle which gives rise to the obstruction. Nor can it be concealed that in many cases the final result would hardly have been different had the exact nature of the impediment been known; for operations involving the contents of the abdomen are always so hazardous, that the prognosis must be very doubtful when it is indispensable to practise them.

Amussat's operation has, however, now and then succeeded, (*Medico-Chirurgical Transactions*, 1851,) and very severe wounds of the abdomen and intestines have been recovered from; but as a rule, the searching within the abdomen is mostly followed by an unfavorable issue. It might perhaps be, that such operations, like some of those for strangulated hernia, owe much of their fatality to the very late period at which they are generally performed: a high degree of inflammation and irritation is already established before the surgeon uses the knife; and when the latter is at all resorted to, both the parts involved and the system at large are unable to withstand the shock of the operation.

This is a fact of very great importance; every one acknowledges it, yet no one will venture to propose gastrotomy before all means likely to promote an evacuation have been used, and the list of such therapeutical means fairly exhausted. Among these means we should not omit to state one which seems to have lately had in France a very rapid and favourable effect. It consists in the application of the hammer of "Mayor" on the parietes of the abdomen, and the shock produced by this kind of knob, previously plunged in boiling water, was, in the recorded instance, so sudden and effectual on the twisting or constriction which probably caused the obstruction, that stools were obtained at the moment when the case was almost despaired of.

It must certainly have occurred to many a surgeon that galvanism might be of some use in obstinate constipation; at least, it seems very probable that a current, the direction of which would of course be regulated by the peculiarities of the case, might stimulate the intestinal coats to such an extent as to make them overcome twisting or slight adhesions.

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We are not aware that galvanism was ever used for such a purpose. In the present state of our knowledge, we should endeavour to become acquainted, by post-mortem examinations, with the nature of the obstructing causes, and it may be hoped that investigations carefully conducted may eventually lead to a method of treatment likely to diminish the number of fatal cases. Animated with this spirit, we beg to adduce the two following cases:—

Caroline B——, aged forty, was admitted Feb. 17, 1851, into Hope ward, with constipation of bowels of five weeks' duration. Enemata were administered, but nothing came away, the pipe of the instrument being admitted for about six inches. There was great tenderness of the abdomen and much sickness, the patient never passing but very slight quantities of fæcal matter. Most of the physicians and surgeons of the hospital saw the patient after she had been about one month in the hospital. Mr. Lawrence stated that he believed it to be a case of contracted bowel, but that so much distention as was here seen might hardly be expected, and mentioned an instance where the patient recovered after severe symptoms of six weeks' duration; but these cases were ever doubtful. In the present conjuncture, the only thing which could be done was to make an incision in the posterior lumbar region, cut down on the colon, and remove the fæces. But he was not prepared to advise this course in the circumstances now before him.

In spite of the most appropriate means the patient went on from bad to worse, and died a little more than a month after admission. The post-mortem examination was conducted with a view of ascertaining whether Amussat's operation would have held out some chance of success. Mr. Lawrence made an incision one inch above the crest of the ilium; the quadratus lumborum, and the tendinous substance of the erector spinæ, were cut through, and when the fascia was divided the colon appeared. This bowel was then carefully opened, and the fæces came out.

Mr. Lawrence remarked, that the patient might easily have been relieved in this case, in consequence of her thinness and the colon being so near the tegumentary surface. On examining the abdomen, it was found that the cæcum had given way, and that there was a constriction at the meeting of the sigmoid flexure of the colon with the rectum. The patient was three months advanced in gestation. The treatment had consisted in turpentine enemata, elaterium suppositories, croton-oil, opium, and wine.

Case 2.—James F——, aged twenty-nine, a miller by trade, was admitted March 14, 1851, into Luke ward, under the care of Dr. Roupell, with constipation of the bowels of three days' duration. Previous to constipation the bowels had for three weeks been much relaxed, and during this period the patient had suffered from an attack of rheumatism. His health has in general been good. The usual means used in such cases were resorted to, but in vain; death occurred six days after admission, a slight evacuation having taken place a little before dissolution. There had been much suffering in this case. The inspection took place twelve hours after death. On the abdomen being opened, the sigmoid flexure of the colon was found twisted upon itself. No adhesion, constriction, or invagination, was discovered, the fatal issue having been caused by the twisted intestine. In this instance the pipe could be passed nearly two feet up the rectum; there was a little obstruction as it was first introduced, but this obstacle being overcome it glided on easily. In this case the same remark was made as to the operation in the loins, which might, had other circumstances been favourable, have been successful.

Inflammation and Suppuration of the Globe of the Eye, following an Attack of Acute Synovitis of the Knee-joint.

(Under the care of Mr. Stanley.)

The question of metastasis to the eye, in cases of blennorrhagia, would appear to be still pending, though the best authorities, among whom is M. Ricord, are firmly of opinion that no blennorrhagic ophthalmia can occur without the eye coming in actual contact with the urethral secretion. Another very interesting question is, how blennorrhagia produces what is called blennorrhagic arthritis: the affection of the joints has in most cases a clear and distinct connexion with the blennorrhagia, but the intimate affinity between the two pathological states is not distinctly made out. We were some time ago much interested in a case under the care of Mr. Stanley, where it appeared as if a *traumatic* affection of the knee-joint stood in immediate connexion with an inflammation of the eye-ball, which proved of so violent a kind that the whole organ was in a short period completely destroyed. We will not pretend to say whether the ophthalmic attack was idiopathic, sympathetic, or resulted from the introduction into the eye of some noxious substance: the case is by itself sufficiently interesting in all its features, and will afford our readers full scope for reflection. We shall just add, that severe inflammation of the whole globe of the eye, as an idiopathic affection, is but rarely met with; and that the progress of the phlogosis is in general so very rapid, that the most destructive mischief is done before the remedial means employed can exercise any control over the disease. The details of the case run as follows:—

Philip D——, aged sixteen, was admitted into Darker ward on the 10th of November, 1850. He is an unhealthy-looking lad, and his right knee is affected with acute synovitis, resulting from the kick of a bullock. The boy has been exposed to great privations, and has led a very irregular life, often sleeping in the pens of Smithfield market. The knee was treated in the usual manner, and was nearly well, when inflammation of the right eye took place.

Twenty-two days after admission, the patient complained of thirst, loss of appetite, and pain in the right eye, the latter presenting but little vascularity. Saline medicine was ordered, and the symptoms being aggravated on the next day, twelve leeches were placed around the eye, and small doses of mercury given, guarded by opium. On the third day, the conjunctiva was much more swollen and rising up around the cornea, which latter was, however, still clear. Pulse quick and feeble. Twenty-four leeches to the eye; fomentations; opening medicine, and four ounces of wine, were ordered.

On the fourth day, the boy was under the influence of mercury; the chemosis, pain, and lachrymation worse; and the pulse feeble. Mr. Stanley desired the wine to be continued, and ordered small doses of quinine. On the seventh day, the patient was in a very serious condition; the pain in the ball of the eye very acute, and the nights sleepless. The upper lid was very prominent; there was excessive intolerance of light, and profuse lachrymation. On raising the lid, the chemosis was found considerable; the globe as tense and unyielding as a deal board, and it seemed as if it must burst. The cornea had now become hazy.

Mr. Stanley removed two or three pieces of the chemosed conjunctiva with the scissors; the tension was, however, not thereby lessened. A question arose, whether it would be safe to diminish the tension by puncture; but Mr. Stanley thought it more prudent to wait. The stimulants were discontinued; mercury-

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with-chalk was given every sixth hour; and fifteen minims of tincture of opium at night.

On the eighth day the tension was less, but pus was noticed in the anterior chamber; and the boy being quite under the influence of mercury, that medicine was discontinued. On the tenth day the patient stated that he had slept well, and that about an hour after he suddenly felt much easier, but had no sensation of anything bursting. The eye was found much less distended, the chemosis diminished, and a substance issued from the conjunctiva which was thought to be the vitreous humour.

Mr. Lawrence saw the patient at this period, and observed that he had seen two or three similar cases, which had been treated for fungus hæmatodes, but they had all turned out to be suppuration of the globe itself. This Mr. Lawrence believed was also the case here. He gave an unfavourable prognosis, saying that the mischief would gradually subside with shrinking of the eye, and total loss of vision. The patient progressed exactly in this manner: the symptoms gradually subsided, and he left the hospital with shrinking of the affected eye, his general health being much improved.

It will of course remain doubtful whether there existed any connexion between the inflammation of the knee-joint and that of the eye. In considering the case, one circumstance should not be lost sight of—viz., the privations and irregular life of the patient. Such subjects will certainly present most extraordinary affections, and step out, in some degree, from the usual track of pathological sequences. We think that the recording of such cases is of some importance to practitioners, as we thus see what unforeseen complications may arise and startle the patient and his medical attendant.

KING'S COLLEGE HOSPITAL.

Disease of the Sacro-Iliac Synchondrosis; Death.

(Under the care of Mr. Fergusson.)

The joints of the body which most frequently are the seat of inflammation and more or less disorganization, are, as is well known, the hip, knee, ankle, elbow, &c. Other articulations now and then come before the surgeon with pathological alterations, as the wrist, metacarpal, or metatarsal joints; but there are certain other parts which seem much less frequently to suffer, and among these we may mention the sacro-iliac synchondrosis. It is of course understood that when the vertebræ are extensively diseased, the destruction may easily reach the sacrum and ilia, but it more rarely happens that the immovable joint which connects the sacrum and ilium is primarily affected. An instance of this kind lately occurred under the care of Mr. Fergusson, and we beg to offer a few details of the case.

Wm. B——, aged fifty three, a stableman, who has been much exposed to wet and the night air, and has drunk spirits largely, was admitted under the care of Mr. Fergusson, May, 1851. He had enjoyed good health until four months before admission, when he felt his right hip and leg stiff and uncomfortable. The right buttock began to swell: there was much throbbing pain in it, as well as in the right knee, after getting warm in bed, and he was frequently awoke by painful starts and spasms of the limb. The patient's health now began to suffer; he could neither sleep nor eat, had occasional rigors, and these symptoms have gone on increasing in severity up to his admission.

On examination the right buttock is very prominent, especially at its upper part, and fluctuation, apparently under the gluteus muscle, can be felt extending nearly as far as the trochanter; there is likewise tenderness and fluctuation in the groin. The patient has slight pain on pressure over the last lumbar vertebra and upper part of the sacrum, and two small abscesses have formed, burst, and healed up in this neighbourhood. The patient complains of constant numbness down the right leg, and always lies on the left side, with his toes turned in under the left foot. Every motion of the limb, except rotation outwards, can be performed; but all these are accompanied with pain. The right leg seems better nourished than the left, and is, at the calf, about an inch more in circumference than its companion, which latter is thin and flabby.

About one month after admission, Mr. Fergusson made an opening in the swelling, and let out a quantity of chocolate-coloured liquid. The patient then went on pretty well with tonics and good diet, and about a week afterwards, Mr. Fergusson made a further opening into the tumour, and gave exit to a large quantity of the same liquid as on the previous occasion; it contained large clots, but little or no pus.

Two days subsequently the patient appeared very low, anxious and weak; he gradually sank during the night, and died in the morning.

On a post-mortem examination, the large cyst of the abscess was found to communicate with the right sacro-iliac joint; the latter being extensively diseased, apparently from ulceration of cartilage. The whole posterior surface of the right ilium was likewise involved, but the vertebræ were healthy.

Demonstration of the Mechanism of M. Boissonneau's new kind of Artificial Eyes, upon a patient of Mr. Partridge.

On Saturday, August 2, 1851, an operation of a rather unusual kind, took place in the theatre of this hospital. It consisted in fitting and placing an artificial eye upon a young man of eighteen, a patient of Mr. Partridge, who had lost one of the organs of vision some time previously. It was certainly very advantageous to the pupils there assembled, that Mr. Partridge should have requested M. Boissonneau to place the artificial eye himself upon the patient in the theatre, and to give a few explanations touching his new method; as not only pupils, but many surgeons, are hardly conversant with the manner of using such substitutes, and with the remarkable improvements which have lately been introduced into this branch of surgical mechanics.

M. Boissonneau showed the artificial eye, which imitated to perfection the sound organ, and having placed it between the patient's lids, it evidently gained a mobility and a consentaneous action with the sound eye, which excited much admiration. The patient was now made to take off and replace it himself: this he accomplished with great facility, owing to the peculiar form and precise adaptation to the globe which had been given to the artificial organ. It seemed that many hardly-to-be-hoped-for requisites had in this instance been obtained: perfect similarity as to size and colour, movements admirably deceptive, facility of taking off and putting on, and complete absence of pain.

Mr. Partridge requested M. Boissonneau to enter into some details as to the nature of the improvements he had introduced, and the peculiarities of his artificial eyes. M. Boissonneau, in complying with Mr. Partridge's wish, stated that it had formerly been the custom to make such eyes of a uniformly oval shape, very much like the longitudinal half of a bird's egg, and that these would only suit perfectly empty orbits, and had no mobility whatsoever; they therefore had the great defect of a fixed stare, and almost always

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necessitated the removal of part of the globe by operation.

Trials had subsequently been made, in order to adapt the above-mentioned form to pretty large remains of the eyeball, but the margins constantly fretted the parts, caused abundant purulent secretion, and proved very inconvenient.

M. Boissonneau was then struck with the idea that it was incumbent upon the enamel modeller to shape and adapt the artificial eye to any form which the globe of the lost organ might have retained, thus avoiding an operation, and gaining for the artificial organ all the mobility which the subjacent globe, aided by the play of the lids, must inevitably give it.

After more than ten years' trial in France, Holland, and all Germany, he had succeeded in regulating the forms, classifying them, and introducing order and scientific sequence in a hitherto neglected branch of art.

We thus perceive that the afflicted have been great gainers by M. Boissonneau's labours, for they escape pain, the similarity is perfect, and the mobility surprising. They can adapt and take off their artificial eyes with ease, and these are even so accurately adapted that they cannot be wrongly put on. We understand, also, that M. Boissonneau uses a kind of enamel, with metallic bases, which is extremely enduring.

As it is unfortunately but too often the case that the surgeon is compelled to declare himself incompetent to restore an eye which has either by accident or disease been disorganised, it is consoling that he has at hand such admirable substitutes, which will at least save the patient from carrying with him a deformity which is ever of a melancholy character.

GUY'S HOSPITAL.

Morbid Inoculation from the affection of the Horse, called "Grease."

(Under the care of Mr. Cock.)

We consider the case which we have this day to publish one of a very important kind, for it settles a question which has not attracted, as far as we are aware, sufficient attention; especially as so large a proportion of individuals are, in this country, engaged upon the care and management of horses.

As regards one fearful disease which but too often attacks these beautiful and trusty animals—viz., glanders or farcy, there is no doubt, among veterinary surgeons and pathologists generally, that it is actually transmissible to man. Very shocking instances of this fact have come to the knowledge of the profession; among the latest we may mention one alluded to in this journal, of a recent date, where a French veterinarian unfortunately fell a victim to the disease.

But it will become clear by the subjoined case, and by those which Mr. Cock has previously treated, that the sanious and foul discharge which in *confirmed grease* issues from the ulcers and cracks situated just above the hoof of the diseased horse, is of a highly contagious nature, not only to the same species, but also to man.

"Grease" is described in the following manner in "Rydge's Vade Mecum:"—"This very frequent disease is a discharge from the skin of the part immediately above the hoof, sometimes attended with cracks and swellings extending higher up. It is caused by weakness of the parts, occasioned by long standing in a stable, or by cold from repeated washings of the legs without rubbing them dry, or from moisture constantly under the feet..... Confirmed grease will often follow; and this is when the cracks become ulcers and discharge a foul and peculiarly fœtid fluid; horny or thick knobs will also form, called by the farriers grapes."

This morbid poison, like the poison of syphilis, small-pox, vaccine or glanders, acts only by inoculation; the great point in the prophylaxis seems therefore to be, to use the utmost caution as to scratches, cuts, or solutions of continuity whatsoever, which may give entrance to the morbid matter. It is well known that the nasal secretion in glanders has been thrown up the nostrils of a sound horse without any bad results; the morbid matter from grease acts probably in the same manner, and requires, like the secretion of glanders, actual inoculation to contaminate the blood. The facts of the case are as follows; they were carefully noted by Mr. J. W. Howard.

Henry C——, thirty years of age, an ostler, residing at Hampstead, was admitted into Guy's Hospital, under the care of Mr. Cock, April 16, 1851, having been ill five days.

The patient is a man of middle stature, of temperate habits, and (with the exception of suffering from an omental scrotal hernia) was in the enjoyment of excellent health up to the period of his admission into the hospital. His nose and each cheek are very much swollen and inflamed, of a rather bright colour, and brawny feel. The nostrils are thickened, and pouring out a yellow purulent discharge. The patient complains of a tingling pain about the nose, and severe headache.

From the history of the case, it appears that, while at his ordinary work, five days before admission, being engaged in washing out the "greasy" heel of a horse, he inadvertently rubbed his nose with the hand he was using, and on which was some of the animal poison. On returning home in the evening the patient felt some heat, and an itching sensation about his nose. Supposing he had caught cold, he thought no more about it that night, but on rising from bed the next morning, the previous unpleasant sensations were much aggravated.

He now observed his nose and cheeks to be considerably swollen, and a thick yellow discharge trickling from the nostrils. His wife having persuaded him that these symptoms were merely the result of a violent cold, applied a mustard poultice to each cheek. No benefit resulted from these applications, and finding the pain and annoyance to continue unabated, the man applied for advice to a surgeon. This practitioner ordered two leeches to be applied to the affected nose, and gave the patient some castor-oil, and two pills to be taken at bed-time. As he obtained no relief from this treatment, and was still continuing to become worse, he presented himself for admittance into the hospital on the 16th of April. Mr. Cock had him placed in a room by himself in Billet ward.

On admission the patient presented the symptoms and appearance mentioned above. His nose was swollen, and of a deep-red colour, with a thick copious yellow discharge from the nostrils; the cheeks were tumid and blotched, and on each side of the jaw was an elevated swelling, hard, tender, and painful, having much the character of a periosteal node. The poor man was suffering most severely, both locally and constitutionally. Mr. Cock ordered three grains of quinine to be taken thrice a day in a glass of wine; likewise a lotion of one ounce of distilled water to half a drachm of nitrate of silver, the lotion to be well and frequently applied to the interior of the nostrils, with a sponge or lint dipped in it, and pushed up each nostril so as thoroughly to destroy the surface of the secreting membrane. Full diet, with ten ounces of port wine, and two pints of porter daily.

On the next day, the patient was found to have

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passed a very restless night; the discharge, although not increased in quantity, still continues, but the swelling and inflammation are much worse, extending over his face and eyelids to such a degree that he can hardly see; the glands about the neck are also enlarged. Mr. Cock punctured the nose very freely, and the flow of blood gave the patient much relief for some time. The same medicines were continued, and ten grains of Dover's powder with one of calomel given at night. The application of the lotion is still frequently continued.

On the third day, the patient had passed another restless night; he complained of dizziness and pain in the head; the nose and face are intensely painful, and the tumefaction so much extended and increased, that the eyelids are now completely closed. Two hard lumps of pus came away from the nostrils. Mr. Cock again punctured the nose, and ordered a bread-and-water poultice to be applied to it. The bowels have been well relieved. The quinine was continued, but the powder omitted.

On the fourth day, a great change for the better had taken place; the patient passed a good night, slept well, and was comparatively free from pain; the tumefaction about the nose, face, and eyelids is much reduced in size, and the pain much less severe; the discharge continues from the nostrils.

From this time, the man continued to improve; and seven days after admission, the nose had regained its natural size; the discharge was much reduced in quantity and consistence; and on the 26th of April, he was presented for dismissal, cured, having been in the hospital only ten days.

Mr. Cock remarked that this was the third case he could call to mind where the evidences of poisonous inoculation were clearly traced to contact with the greasy heel of a horse. In both the other cases the poison appeared to have been imbibed from wounds or cracks on the men's fingers, and the most severe absorbent inflammation was produced, accompanied by intensely acute constitutional disturbance.

In the one instance the patient recovered after much suffering and tedious illness; in the other he died at the end of several weeks, worn out by successive abscesses, which formed in different parts of his body. There seemed therefore no doubt that the greasy heel of the horse was capable of grafting a specific poison upon the human subject.

As in this case the fact of poison seemed to be clearly indicated and proved, and as the inoculation had been recent, Mr. Cock considered it expedient to endeavour to destroy the contaminated surface as speedily as possible, and to excite a healthy suppurative action on the mucous membrane of the nostrils.

The caustic solution was severely and unsparingly applied, and certainly seemed to have the decided effect of "killing the local disease." The aggravation of inflammation and tumefaction which followed the use of the escharotic, and which extended over the nose, cheeks, and eyelids, was doubtless rather to be attributed to the severity of the remedy than to the extension of the original disease. The same local effects have not unfrequently been produced where a strong solution of nitrate of silver has been injected into the urethra for the purpose of cutting short a gonorrhœal discharge.

Mr. Cock made the punctures in this case with a broad shouldered lancet, and carried them to a considerable depth. The blood flowed from the wounds in streams and jets, showing the congested and distended state of the vessels. The relief was most speedy and effectual.

It is strange that the part of the body which this patient touched after coming in contact with the greasy hoof, was such as to give the subsequent affection some of the characters of glanders. Whether in the horse there is a morbid analogy between the purulent matter of glanders and that of grease we will not pretend to decide; but the morbid secretion of the latter seems, when inoculated upon man, to produce symptoms somewhat similar to those excited by a dissection wound. In fact, there is morbid poison circulating in the blood, and the manifestations are somewhat modified by the locality where the inoculation has taken place.

It is, finally, with much satisfaction that we remark that the affection excited in man by the matter of the greasy horse is more amenable to treatment than glanders in the human subject. From the foregoing case it seems pretty clear that "unsparing cauterization," stimulants, and tonics, are the most likely means to bring on a favourable result.

WESTMINSTER HOSPITAL.

Stone in the Bladder; Lithotrity; Cure.

(Under the care of Mr. Barnard Holt.)

We are inclined to believe, from the facts which come before us in the hospitals of London, that lithotrity is becoming a favourite operation among the surgeons of those institutions; and it is a subject of congratulation that an operation for the most part so safe and effectual, should begin to gain ground. It must, however, not be concealed that the utmost care in the choice of patients is of the greatest importance, and that success depends perhaps as much on such discrimination as on manual dexterity.

We have lately had an opportunity of watching two cases which seemingly offered a very fair prospect of success—one in a man somewhat advanced in age, the other in a middle-aged patient: both ended fatally. In the first case, the irritation set up by the operation reacted violently on the system; and in the second, various morbid manifestations sprung up, seemingly independent of the operation, and the patient sank. Whether the same results would have in these cases followed lithotomy, is not easy to determine; but it may be surmised that cutting for the stone would have hardly been more successful.

A satisfactory state of the general health, a pretty sound condition of the bladder, and a moderate-sized stone, are requisites without which it is somewhat hazardous to undertake lithotrity; and though much is left to the discretion and discrimination of the surgeon, there are certain rules which must not be infringed. It is, however, clear that complications may occur with lithotrity, as with other operations, which the shrewdest cannot foresee, and which will baffle the most legitimate hopes and best directed skill. It would seem, however, that success is much influenced by the more or less ready manner in which the stone is seized and crushed; and though this part of the proceedings may, to the bystanders, appear of easy accomplishment, experienced surgeons know that a good deal of habit and dexterity is indispensable, not only for seizing and crushing, but likewise for the use of the scoop.

Students, in particular, would become aware of these facts by a simple contrivance, which, in the various schools, might be introduced by the professor or lecturer on Surgery. A model somewhat analogous to the figure used in the lectures on midwifery, might be constructed, the male urinary organs imitated with those elastic substances now so common among us; and the lower part of the walls of the abdomen, as well as the anterior parietes of the bladder, might be entirely left out, or made of glass. The lithotrite would thus be *seen* gliding into the bladder, and each

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pupil might have a trial at seizing the stone, or at using the scoop. Experiments of the same kind could now and then be made on the dead subject, without much interfering with its value for subsequent dissection.

We must apologise for this little digression, which is, however, not quite foreign to the subject, and beg to enter upon the particulars of Mr. Holt's case, which presented, in an unusual manner, a very fortunate combination of favourable circumstances, and which will tend to show, by being compared with Mr. Coulson's lithotomy case, (THE LANCET, Sept. No., p. 225,) that the cutting operation is as advisable in the child, as the crushing in the adult.

——, a healthy countryman, about sixty-five years of age, was admitted, April 14, into the Lithotriptic ward, suffering from stone in the bladder. He stated to Mr. Holt, under whose care he was placed, that five months previous to admission he had been apparently attacked with inflammation of the kidneys, great pain being experienced in the back, and subsequently along the course of the right ureter. This pain was severe, and continued with little intermission for five days, when the patient was suddenly relieved, and enabled to resume his occupation of farm-labourer.

He continued his avocations for three weeks, when he complained of pain after micturition (which had latterly been more frequent than ordinary) at the extremity of the penis; and likewise that his urine was occasionally tinged with blood. These symptoms became so intense, that he was unable to continue his employment or indulge in any rough exercise, and he sought the assistance of a surgeon, who, suspecting the existence of calculus, introduced a sound, and readily felt a foreign body.

One day after the patient's admission, Mr. Holt passed a sound, but was unable to detect any calculus. The man was ordered a dessert-spoonful of castor-oil every morning, and barley water for beverage. Upon introducing the sound two days afterwards, Mr. Holt directly detected the stone, which appeared to be small and soft. The patient was kept in bed; he continued the castor-oil and barley-water, and was allowed some beef-tea.

On the fourth day after admission, the bowels having been previously relieved, the urine being copious, and the bladder not irritable, Mr. Holt injected this viscus, introduced the lithotrite, and readily caught the stone. The latter was small, very fragile and easily broken by the slightest pressure of the screw. The crushing was repeated five or six times, without the patient complaining of the slightest pain, and every portion was apparently reduced into minute fragments. Upon passing water immediately afterwards, the patient evacuated readily a considerable quantity of dust, of the lithic-acid character. He was desired to keep in bed, drink plentifully of barley-water, and to take five grains of Dover's powder, suspended in mucilage and water, every fourth hour.

For the first three days after the operation, the patient progressed very favourably, and passed moderate-sized fragments with each evacuation of the bladder. On the fifth day, no more detritus having been ejected, Mr. Holt introduced the scoop, and easily removed several pieces, without any pain to the patient. From this to the tenth day, no unpleasant symptom arose; but the scoop was once more used, in order thoroughly to ascertain whether any pieces were left. Two fragments were detected, and readily brought away. Seven days afterwards, the scoop failed to detect any more fragments, and the patient, having remained perfectly well up to the twenty-second day after the operation, was discharged. On his leaving the hospital, he passed urine only three times a day, was not compelled to get up in the night, was perfectly free from pain, and able to take any amount of exercise.

Mr. Holt remarked that in all the cases in which he had operated, he never met with one more peculiarly adapted to the operation of lithotripsy than the present; the capacious bladder and urethra, the small size and fragile nature of the stone, and excellent health of the patient, all offering the best chance of a speedy and successful termination. In this instance, *one* operation was found sufficient, the after introduction of the scoop having been had recourse to for the purpose of facilitating the removal of fragments, the non-irritable condition of the bladder being very favourable to its introduction.

It will be seen that Mr. Holt did not use the lithotrite as a sound, as he considered it much better, after having been once satisfied of the existence of a foreign body, to introduce the lithotrite, depress the lower blade, and thus form a pouch of the posterior wall of the bladder, into which the stone readily fell. Indeed, in subsequently searching for fragments, if they are small, it is almost impossible to detect them in any other way. It is, in fact, in the majority of instances, useless to introduce a sound for the purpose of detecting any fragment that may be detained in the bladder; it is much better to inject the viscus and introduce the scoop, going through the same steps as if the stone were unbroken. By depressing the posterior wall of the bladder, if there be a fragment, it is crushed.

MIDDLESEX HOSPITAL.

Ventral Hernia supervening on a Wound of the Abdomen, received many years previously.

(Under the care of Mr. HERAY.)

A VERY short time ago we had an opportunity of directing the attention of our readers to umbilical hernia, and we endeavoured to show how useful were such mechanical contrivances as exercise the proper amount of pressure without giving pain or exciting morbid changes in the part. We have now to report a case of a somewhat analogous kind of hernia—namely, the ventral; not brought on, however, by weakness of the abdominal walls along the lineæ alba, the lineæ semilunares or transversæ, but as the result of a wound, inflicted many years previously.

It has been observed that the general symptoms are very severe when a ventral hernia becomes strangulated, and that an operation for the removal of the constriction is demanded within a shorter time than in common instances of strangulated hernia. These peculiarities were well illustrated by the following case, which has had a very fortunate issue; it will likewise give support to the current opinion, that whenever the parietes of the abdomen have been either wounded or bruised, there is always danger of intestinal or epiploic protrusion.

The question here naturally arises, whether it would not be proper, when we come in contact with people who have at any time met with a wound of the abdomen, to advise the use of a light truss upon the cicatrix. This measure might of course have the disadvantage of irritating the part, and provoking in the cicatrix those changes which have been so well described by Cruveilhier and Mr. Cæsar Hawkins; but a contrivance might easily be devised, in these days of clever adaptation of caoutchouc, by which gentle support without inconvenient pressure might be afforded. However this may be, it is plain that patients bearing such a cicatrix should be warned to pay the most scrupulous attention to the state of their bowels, and apply for relief at the least obstruction.

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A. B——, coachman to a private family, married, and of temperate habits, was admitted into Middlesex Hospital, July 15, 1851, under the care of Mr. Henry, with several of the symptoms of strangulated hernia. On the right side of the umbilicus, and somewhat nearer to it than to the crest of the ilium, a tumour is perceived about the size of half an orange; it is soft and yielding, and not particularly sensitive and painful. No evacuations of the bowels have been obtained for the last two days; the pulse is small and quick, the countenance anxious, and the tongue thickly coated.

On inquiry, the following particulars touching the history of the case were elicited. The patient states that for the last twenty-nine years he has had a tumour of a small size in the locality where the present swelling is perceived; this circumstance having arisen from a stab with a dessert knife, which was inflicted upon him. On that occasion the perforation of the abdomen had been of sufficient extent to allow some coils of intestine to escape; these were carefully returned, and the patient kept quiet for about a fortnight. The wound soon healed up; a firm cicatrix formed; but a small lump, as the patient calls it, remained on the part originally struck by the knife. He did not wear a truss, and engaged in pretty toilsome occupations without experiencing the least inconvenience, enjoying for a period of twenty-nine years strong and robust health. The bowels, though somewhat relaxed a few days before admission, had generally been regular, and the patient does not remember having suffered from sickness or any other unpleasant symptom.

Two days before his reception into the hospital, the patient was seized with a gnawing pain across the abdomen, which became so distressing that Mr. Norton was called in. The above-mentioned tumour was not particularly tender, but the pain was radiating from it to the left side. Mr. Norton ordered poppy fomentations to the abdomen, and gave calomel and opium, followed by a saline purgative. No relief was, however, obtained; and towards the evening, as the tumour was getting tender, leeches were applied, and the patient took five grains of calomel with two of opium, the saline purgative draughts being continued during the night. The restlessness did not, however, abate; and as on the next morning the taxis did not succeed in notably diminishing the tumour, and no alvine evacuations could be obtained, it was thought advisable that the patient should be removed to the Middlesex Hospital. Here he was placed in a warm bath, and a little time afterwards an enema of gruel and oil was administered. These means were followed by a small evacuation, principally composed of scybala; evident relief had been thus obtained, and towards the evening another enema was given, which was followed by a somewhat copious motion.

Early in the morning of the next day, Mr. Henry found the patient pretty well; the night had been good, the symptoms noticed on the previous day had disappeared, and the man declared that the swelling was now no larger than usual. On handling the latter it yielded the sensation of being formed of omentum. The case looked at this time extremely favourable, the principal symptoms were relieved, and it may be conjectured that a portion of strangulated bowel, which had given rise to the distress above described, had now returned into the abdomen.

Mr. Henry prescribed some infusion of senna, and saw the patient again at noon. A great and sudden change for the worse had taken place; the medicine had been vomited, the tumour was larger, and all the signs of prostration had returned in a marked manner. Mr. Henry now considered that an operation was urgently demanded, and should no longer be deferred.

The patient was, therefore, taken to the operating theatre, and placed under the influence of chloroform. Mr. Henry divided the integuments the whole length of the tumour, (the latter being situated, as above stated, below and somewhat nearer to the umbilicus than to the crest of the ilium.) The aponeurosis of the muscles and the deeper fascia were carefully incised on the director, and a large mass of adherent omentum presented itself, below which a knuckle of intestine, of a bright reddish colour, and of considerable size, was lying.

Mr. Henry at this stage passed his finger towards the upper portion of the opening, in order to ascertain the nature of the constriction. He found the omentum, which had escaped from the original wound in the abdomen, firmly adherent to the margins of the traumatic aperture, the edge of which, at the upper part, was exceedingly sharp. With the probe-pointed bistoury lying on the index-finger, he made a very slight incision, which sufficed to liberate the coil of intestine; this was easily returned, and the wound closed by sutures, the omentum being left in its original position.

Mr. Henry was of opinion that a portion of omentum had escaped from the original wound in the abdomen, and had there remained ever since, serving to block up what would otherwise have been a large gap in the abdominal walls.

The relief from the operation was most marked, the pulse regained its volume, and the countenance its natural appearance. In the evening there was slight tenderness in the abdomen; for this Mr. Henry prescribed three grains of calomel and two of opium, a combination which he has found to act as an excellent sedative. The next day the bowels were spontaneously moved, the patient progressed very favourably, and he did not, for the following fifteen days, require any medicine, except, on one occasion, when a gentle purge was given. The wound is almost cicatrized, and the man will be very shortly discharged.

This case is altogether of an exceptional character, among its features it will be noticed, how very suddenly the symptoms changed either for the better or the worse, and how severe were the signs of strangulation a short time after alvine evacuations had been obtained. We have here also a good example of the advantage of operating early; and it will be seen that no repeated efforts at taxis were made, Abernethy's great principle being carried in mind, that every handling of a tender part is a bruise. Assuming that the omentum was lodged for such a long time, as Mr. Henry conceives it, this circumstance would certainly militate with the usual notion, that the vicinity of the stomach to the displaced epiploic portion is likely to give rise to frequent attacks of colic and vomiting. Perfect health was enjoyed up to the period of strangulation of a piece of intestine, but the symptoms were then certainly more urgent than in common cases of strangulation in the usual regions.

On the whole, it may be doubted whether there are many cases on record in which, after so many years, a portion of intestine became strangulated in the traumatic aperture, where for so long a period a piece of omentum had been lying.

LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

Cases of Hard Cataract; Extractions.

(Under the care of Mr. Dixon, Mr. Critchett, and Mr. Bowman.)

Our readers are aware that a vast number of cases of cataract are annually operated upon in the various ophthalmic institutions with which the metropolis is

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endowed. Such cases do not offer the startling interest which sometimes attaches to other surgical operations; but there are certain features, both in the manipulation itself and in the after-treatment, which are peculiar to certain hospitals or to individual surgeons. These we think worthy of being recorded, and shall henceforth dwell upon them whenever such features present any practical utility.

In the Moorfields Hospital the patients are generally made to lie down on the back upon a narrow table, and the surgeon takes his seat at the patient's head, using either his right or left hand, according as the left or right eye is to be operated upon. In the extractions which we saw performed, the flap was made of the upper part of the cornea. To this mode of acting, Mr. Lawrence is favourable; for he says, "By this operation the surgeon has a more complete control over the globe; he can fix it perfectly; the aqueous humour does not escape so readily, and consequently the section of the cornea is more readily accomplished; there is less chance of prolapsus iridis, and the upper lid keeps the flap of the cornea in exact apposition."

Another peculiarity in this hospital relates to the treatment after the operation. No blood-letting or antiphlogistic medicines are prescribed, as it is held that the inflammation against which these means are used seldom occurs, and that the reverse of depletion ought to be the rule, where the system is expected to exert itself in the work of repair. The success which has mostly followed this practice in a great many cases (among which we have selected the three which are here subjoined), is certainly calculated to give these views great weight and importance; and we have much pleasure in bringing that practice before our readers.

The last remark which we beg to add refers to the use of belladonna or atropine. We perceive that neither belladonna nor its alkaloid is applied before the operation, the surgeons mostly operating without giving to the pupil that dilatation which is sometimes sought in such circumstances. We do not venture to decide which of the two practices is the most trustworthy, though we are inclined to believe that a little dilatation of the pupil may facilitate the operation. For extractions of hard lenses, and for the breaking up of soft ones, chloroform is not used. We saw, however, the anæsthetic agent given to a patient in a peculiar case involving much pain, which we hope soon to be able to present to our readers. From the notes kindly furnished by Mr. Ledger, the house-surgeon, we are enabled to give the following details:—

Case 1.—Jane P——, aged seventy-six, from Leatherhead, in Surrey, was admittted May 8, 1851, under the care of Mr. Dixon. She is a remarkably tall, robust woman, has the appearance of being at least twelve years younger than she really is, and declares she never was laid up with a day's illness since her childhood.

Cataract was fully formed in each eye, but rather denser in the left than in the right. She had good perception of light; the irides acted briskly, and, except the lenses, every tissue of the eyes appeared to be healthy.

On May 9th, Mr. Dixon extracted the right lens by the upper section; it came out quite entire, without any of its softer portion being left behind. The advanced age of the patient rendered it highly important that her reparative power should be well kept up from the first, and she was therefore ordered to have strong beef-tea on the day of the operation, and the day following to take meat for dinner. She had no pain at night and slept well.

Mr. Dixon did not examine the eye until the 14th, (the fifth day after the operation,) when the corneal wound was perfectly and firmly united, the aqueous humour retained, the pupils central, round, and clear, and she recognised large objects distinctly. The eye was kept covered for a few days longer, and half a pint of porter was added to the patient's daily meal. She left the hospital May 22nd, (thirteen days after the operation,) not having had a single bad symptom.

When the patient returned, about a month after her first admission, there was none of that chronic inflammation of the conjunctiva which so frequently continues in old people for several weeks after the operation of extraction; and Mr. Dixon remarked that her case affords an instructive instance of the rapidity with which recovery may take place in a very old person, provided the bodily constitution be vigorous, the disposition calm and tranquil, and due care taken, by affording sufficient nourishment, to enable the reparative process to be quickly completed.

Case 2.—Esther D——, aged sixty-one, (residing in Blackfriars-road,) of rather spare habit, but having generally enjoyed good health, was admitted under the care of Mr. Critchett, May 8th, 1851, with hard cataract in each eye. She had a good perception of light, no adhesions of iris to capsule, as shown by the application of atropine, and vision was much improved by the use of the same. The sight of the right eye had been defective about three years, and within the last ten months that of the left had been getting dim.

On Friday, May 9th, Mr. Critchett extracted the right lens by the upper section. The iris was not wounded, but there being considerable spasm after the counter-puncture was made, Mr. Critchett thought it advisable to wait for a second or two before completing the section, which was afterwards finished without any difficulty.

The patient was free from pain during the remainder of the day, but towards night complained of slight aching pain, which, however, was always relieved as soon as the tears found an exit.

On the second day, the report was that she had slept at intervals during the night, and quite free from pain; the eyelids not at all swollen. Pulse quiet; skin moist; bowels not relieved since the 8th. Ordered strong broth for dinner, and to remain in bed.

Third day.—Has passed a good night, and free from pain; tongue clean; bowels open; appetite good; pulse slow and weak; ordered meat daily; porter half-a-pint.

Fifth day.—The eye being examined, the section was found to be firmly and evenly united, the pupil central and circular, and aqueous humour re-secreted; no inflammation of the conjunctiva. The patient can see the features distinctly; she is allowed to get up, but on no account to use either eye.

Twelfth day.—Left the hospital with good vision; since that period the patient has several times been seen; she was last at the hospital on June 25, about six weeks after the operation, when she could see to read small print with the assistance of a lens; there is a small piece of opaque capsule at the upper part of the pupil, but not of sufficient size to interfere with the field of vision. The patient was ordered to attend again a month hence, when she will receive an order for glasses.

Case 3.—A. F——, aged sixty-nine, of spare habit, anæmic complexion, and accustomed when young to live freely, was admitted under the care of Mr. Bowman, May 8, 1851, with a hard cataract in each eye. The irides were active and contractile; he could not see sufficiently to guide himself about, but the sight was much improved by the use of atropine. On Friday,

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May 9th, Mr. Bowman extracted the left lens by the upper section, without any loss of vitreous humour, or other unfavourable accident. Both eyes were then closed with linen blinkers and a bandage, and the patient removed. During the afternoon he dozed a little at intervals, and was quite free from pain.

On the second day he said that he had passed a pretty good night; there was no pain; pulse slow and weak; skin moist; eyelids not at all swollen. Ordered, strong beef-tea for dinner.

Third day.—The patient had slept well, and was free from pain; pulse as yesterday; bowels open; tongue clean; appetite good. Ordered, meat (cut up in small pieces;) beer, half a pint.

Fourth day.—Quite free from pain; pulse has more power, but still very slow; slept well. The eye being opened, the cornea was found quite clear; the pupil central and circular; there is slight conjunctival inflammation, and the section is not firmly united, as shown by the aqueous humour oozing from the upper part. He can see the hand when moved, and even distinguish the features of the by-standers. Meat daily; porter, one pint.

Sixth day.—Going on well; sleeps well; appetite good; pulse stronger; bowels regular. The section of cornea firmly united, and the anterior chamber filled with aqueous humour. The patient can count the number of fingers when held up, and see the features distinctly. He continued to improve until the tenth day, when he left the hospital; but he has attended several times since, and sees well. The sight of the left eye had failed him five years; that of the right, two years and a half.

It is observable that this man was habitually very pallid, and had the appearance of a confirmed invalid; still there was no determinate disease about him. He stated that this had ever been his complexion, and that he had had no complaint of any kind for thirty years; he was, like the patients mentioned in the preceding cases, of a quiet, placid disposition. Mr. Bowman had therefore undertaken the operation of extraction.

It may be further observed that this patient had a very decided *arcus senilis* in both eyes, that the corneal section was carried exactly through the arcus, and that, nevertheless, perfect union was accomplished. This is entirely according to the experience of the surgeons of the institution, who are of opinion, judging from a large number of cases, that the existence of an arcus may be disregarded as an element for consideration when the operation for cataract is contemplated. The section may be carried through it with perfect impunity, and union appears to occur in the part thus affected quite as speedily, and as firmly, as in other parts of the cornea, or as in other cases where there is no arcus, provided, always, that the general powers of the patient are such as to provide the reparative means of union.

It might indeed, *à priori*, be imagined, that a part of the cornea affected with what appears, according to Mr. Canton's researches, to be fatty degeneration, would not undergo repair like a sound part; but the facts repeatedly observed at this hospital are not in accordance with this notion, and show that union very readily takes place.

ST. GEORGE'S HOSPITAL.

Encephaloid Tumour occupying the popliteal space; Amputation; Phlebitis; Death.

(Under the care of Mr. CÆSAR HAWKINS.)

THE diagnosis of tumours (the latter term being taken in its widest acceptation) is confessedly difficult, and it cannot be denied that practical surgeons frequently find themselves dreadfully embarrassed, notwithstanding the vast amount of labour which has been bestowed on the investigation of the subject, and the extensive experience such surgeons may possess. Breasts have been incised for the removal of a tumour, when it was found, by a jet of pus, that abscess was the disease; stone-hard tumours have been punctured, and found to consist of a cyst greatly distended by fluid, &c. But the doubtful characters seldom go so far, and the chief difficulty has ever been the distinction between benign and malignant tumours. And here we find one important point (to which we have before alluded) in which pathologists differ — viz., whether a simple and innocent tumour may degenerate into a malignant growth. Mr. Miller says, p. 329 of his "Principles of Surgery"—"The tumour may be from the first of this kind (encephaloid), or a growth originally simple (the original says *single*, but this is probably a misprint) may have degenerated and assumed a medullary character;" and page 330, "In tumours of any considerable duration, cavities may always be expected, more or less numerous. They are of two kinds, mere spaces or true cysts, lined by a secreting membrane, and filled with frothy blood, with dark fluid, or with soft medullary matter. When the latter are found, the probability is that the tumour has been originally of the simple cystic kind; that it has degenerated; and that these cysts are remains of the original and non-malignant structure, not yet annihilated. All the simple tumours are liable to degenerate into the medullary; the cystic, the most prone; the fibrous, the least." Mr. Paget, on the other hand, is quite of a different opinion, and we heard him express it on an occasion which is worthy of record.

The patient was a woman, thirty-seven years of age, who for the last two years had noticed a tumour, about the size of a hazelnut, in her right breast. From the external characters, it was difficult to tell to what class of tumour the present belonged—namely, whether it was a schirrhous growth, or an ordinary chronic mammary tumour. Mr. Stanley, under whose care she had placed herself, made an incision into it, found that it was of the schirrhous kind, and removed the whole gland. In examining the latter, another little tumour was discovered quite embedded in the gland, and this proved to be a chronic mammary growth. Now, the question naturally arose, whether the schirrhus had originally been of a benign kind, like the second tumour found, and had suffered transformation. Mr. Stanley and Mr. Paget were of opinion that such had not been the case, and that the two growths were of a perfectly distinct nature. Mr. Stanley considered it, however, an occurrence of a very rare description, that two tumours of such different kinds should contemporaneously be developing in the same breast, though he did not believe that they were convertible.

In the case which we now have to relate, an instance was afforded of the gradual encroachment of medullary tumours—vessels, nerves, tendons, &c., are gradually either surrounded or pushed aside, and the slow but sure progress of the tumour invades inch after inch until the integuments are driven to their utmost degree of tension. In this, as well as in a few other cases of the kind which we have had to report, the bone, though suspected to have shared in the affection, was found intact. The details of the case are as follows:—

Mary H——, thirty-five years of age, was admitted June 25th, 1851, under the care of Mr. Hawkins, with a large tumour, situated, the greater part of it, at the lower and inner part of the left thigh, but presenting also on the outer side, and encroaching on the popliteal space of the tibia. The tumour had first been

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noticed in March, 1849; it had since been punctured, and amputation of the thigh proposed, and only postponed because the patient was considered at that time (a fortnight before admission) not in sufficient good health. She had never been strong, but there was no evidence, on her admission, of any organic disease. The tumour was judged not to contain fluid, although some parts of it conveyed a sensation very like fluctuation; it was movable, and it was stated by the patient that it had always been so; the pulsation of the tibial vessels was obscure; the flexor muscles could be traced over the tumour, the tendon of the semitendinosus being raised into the middle of the popliteal space.

It having been found impossible to decide with certainty on the nature of the tumour without an exploratory incision, it was determined to begin the operation with such an incision, and should the tumour appear innocent, unconnected with the bone, and not involving the great vessels, to dissect it out; otherwise to perform amputation while the patient should still be under the influence of chloroform.

The incision, which ran through the flexor muscles, about the middle of the back of the thigh, into the substance of the tumour, appeared to disclose a decidedly malignant structure; the thigh was therefore speedily amputated.

On examination the tumour showed to the eye all the characteristics of medullary disease. Mr. Quekett, however, who examined a section of it under the microscope, did not find any nucleated cells of morbid character. The femoral artery and vein ran through the substance of the tumour, and the sciatic nerve crossed it obliquely, though it was not altered in form. The tumour measured ten inches longitudinally, and the affected thigh five inches more in circumference than the sound one.

The patient went on well for a few days after the operation, when symptoms of phlebitis occurred, and the discharge from the stump became very foul and offensive. She was supported with tonics and stimulants, the wound disinfected with chloride of soda, &c.; but in spite of opium, wine, brandy, &c., she died about one month after the operation.

On laying bare the vessels of the upper part of the thigh, the superficial as well as the deeper veins which communicate with the common femoral, were greatly distended by blue blood, though presenting quite healthy lining membranes. The femoral vein itself contained the greatest amount of dark blood, which in places had proceeded to softening, and the formation of dirty pus-like fluid. Much coagula existed in the entire length of this and the external iliac vein, almost as far back as the commencement of the internal iliac, and their lining membrane was of a dark reddish-brown or slate colour, especially in such places where the coagula were adherent. The femoral artery was healthy. In the substance of the posterior portion of the left lung was a single light-coloured deposit, in which no indication of softening existed.

It is unfortunately but too common an occurrence to see patients attacked with phlebitis after a capital operation; the above result comes therefore within the usual range of accidents. We would, however, venture to raise the question of what amount of influence an existing malignant disease may have on attacks of phlebitis after amputation. It may be that it has none; but it would be worth while for such investigators as Mr. Henry Lee, who has thrown so much light on the inflammation of veins, to inquire whether the connexion just mentioned has any existence.

ST. MARY'S HOSPITAL.

Fracture of the Ribs; Emphysema; Pneumonia; Recovery.

(Under the care of Mr. COULSON.)

FRACTURES of ribs, when uncomplicated, are lesions of very small importance; but with the complications to which they are liable, they may be looked upon as accidents involving a certain amount of danger to life. Such fractures bear some analogy with those of the cranium; for cracks, and even pretty extensive fractures of the skull, need not, *per se*, create much alarm, provided the meninges or brain escape laceration or compression: as to concussion, it is not influenced at all by the presence or absence of fracture. Thus we anxiously look at the *contents* of the brain or thoracic box, when, either by direct or indirect agency, they have suffered fracture.

Cases have been recorded where fracture of several ribs has caused very rapid death by hæmorrhage, the piece or pieces driven in having wounded one of the more important arteries or veins within the thorax, and actually filled this cavity with blood. The little boy, upon whom a heavy bough fell a short time ago in Hyde-park, and who died in St. George's Hospital, had received, besides various other injuries, one of this kind, which evidently was the immediate cause of death.

Incomplete fractures of the rib generally entail but little risk upon the patient, and even pass very often unnoticed. Among the complete fractures, those which give rise to displacement are of course the most dangerous; but, from the investigations of very competent surgeons, it would appear that this displacement does not occur so frequently as has been supposed; and there have even been surgeons who regard it as somewhat problematical.

J. L. Petit, for instance, thought that the displacement was possible to a very small extent only, as the anterior fragment is fixed to the sternum, the posterior to the vertebral column, and both attached by the intercostal muscles to the sound ribs, which latter act in some degree as splints. Vacca Berlinghieri, Richerand, and Giraud, went even further in their doubts, and M. Malgaigne has thought the subject worthy of most minute inquiry.

The latter surgeon, after various experiments, has found that even incomplete fracture may produce some displacement, when one of the margins or surfaces of the rib is broken off. In complete, or multiple fracture, displacement does or does not happen in about the same proportion of instances. None, however, occurs when the periosteum remains entire, or when the fracture is denticulated. M. Malgaigne thinks that the simultaneous displacement of both fragments, one outwards and the other inwards, never happens. (Nelaton, "Pathologie Chirurgicale," p. 710, tom. i.)

The treatment of pulmonary complications must of course be here conducted on the same principle as when the lungs are idiopathically affected; and among the exclusively surgical means to be employed, we find that the use of a bandage around the chest is, with some surgeons of the hospitals of London, either carefully carried into practice, or altogether rejected; —pretty well as we see some accouchers very particular about applying the bandage round the abdomen after parturition, and others wholly repudiating this measure.

Mr. Hancock at [illegible]ring-cross Hospital, never uses compression of the [illegible] in cases of fracture, and relies principally on opium. Mr. Coulson, as will be seen by the following case, advocates modified pressure in instances where pain, along with other circumstances, keeps the intercostal muscles sufficiently at rest.

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From the notes of Mr. Bullock, the house-surgeon, we gather the following details:—

Joseph B——, a labourer, forty years of age, was admitted June 28th, 1851, under the care of Mr. Coulson. The patient had just fallen off a hay-rick, about seven yards high, the violence of the fall having been borne by the left side of the trunk. He was in a state of collapse, with feeble and frequent pulse.

On examination, the angles of the fifth, sixth, and seventh ribs were found to be fractured; (the peculiarity of the fall caused here a certain deviation from the rule, as such fractures generally happen much more anteriorly than the angle;) the areolar tissue of the back, from the neck to the loins, was emphysematous, especially on the left side, also over the anterior part of the neck and upper portion of the sternum. There was likewise a good deal of swelling around the left shoulder, and it was suspected that the head of the humerus was displaced. About an hour and a half after admission reaction took place, the respiratory murmur was found present on the right side, and quite absent on the left, and a click on inspiration was heard over the fourth rib, on the left side. The movements of the chest, as measured by Dr. Sibson's stethometer, gave for the second rib on the left 2, for the same rib on the right 6, left ninth rib 0, right ninth rib 4·6.

The patient with a full pulse, and respirations at 48, was still in a listless state, when Mr. Coulson ordered venesection to twelve ounces; and after the bleeding, the pulse and the number of respirations fell considerably. Calomel and opium, in small doses, were now prescribed, and a bandage placed around the chest, so as to moderate the action of the intercostal muscles.

In the evening, the patient was a little better; he had passed urine twice, but the bowels were still confined; he complained much of thirst, and the abdomen was slightly tympanitic; pulse 80. The patient states that he finds the bandage somewhat too tight, and the act of expectoration is extremely difficult. The bandage was loosened, and on the next day the sputa were brought up with the same difficulty, and tinged with blood; whilst coughing gave great pain in the chest. Mr. Coulson desired ten ounces of blood to be taken. Calomel and opium was continued, and an antimonial mixture prescribed.

On the third day, some of the air in the areolar tissue was absorbed; and the symptoms being much the same, the man was again bled to twelve ounces, and the bowels opened by purgatives.

On the fourth day, the patient was heard to mutter a little; the pulse rose to 130, became fuller, the face flushed, and pain in the chest was very troublesome. Eight ounces of blood were now removed, the pulse fell, and the patient went to sleep.

On now examining the chest, sonorous rhonchi were heard on the left side, both with inspiration and expiration, as well as mucous rhonchi, almost to gurgling. Over, and a little below, the fourth rib, a slight amphoric resonance is heard; and percussion on the same side yields complete dulness. Some mutton-broth was now allowed.

The sputa, on the fifth day, were less rusty; the mouth was getting sore with the mercury; and the skin much cooler. On the seventh day, the respiratory murmur began to reappear, and the pain diminished. Up to the 15th day, the patient progressed favourably, the cough becoming somewhat troublesome as resolution was advancing; but symptoms of great weakness now appeared, he had diarrhœa, and fell into a state akin to the typhoid.

With proper tonics and stimulants, he was gradually brought round; and on the twenty-third day, the countenance had again become cheerful, the cough had abated, and auscultation and percussion were giving normal sounds.

About one month after admission, the patient, who was improving rapidly, complained of pain and stiffness in the left shoulder, and inability to raise it. On careful examination, (which had before been prevented by his very weak state,) it was discovered that the head of the humerus was partially dislocated upwards and forwards. This displacement was reduced without difficulty, and it was observed that the locality where the ribs had been fractured presented a very notable but firm depression. The patient proceeded from this time in a satisfactory manner. He is on the eve of leaving the hospital, there being no impediment in the normal play of the lungs.

The latter fact is certainly a very interesting example of the manner in which functions are carried on under disadvantageous circumstances. Nor should it be overlooked how beneficially the fearless abstraction of blood acted in the present instance. Reckless blood-letting is happily no longer practised as formerly; yet cases do occur, where the patient's safety requires the free use of the lancet: it is for the physician or surgeon to discriminate such cases from those where resolution can be obtained by simpler means.

LIVERPOOL INFIRMARY.

(Reported by Mr. F. D. Fletcher, House surgeon.)

Rupture of the Popliteal Artery, &c.

James ——, aged forty-six, a labourer, was admitted at the Liverpool Infirmary, under the care of Mr. Cooper, on the 28th of July, 1850. He stated that when working yesterday in the hold of a vessel, measuring wheat, a sack of wheat fell on him from a height of about seventeen feet. He was standing at the time a little raised on his toes, and leaning forwards. The sack struck the back part of the right leg, about the bend of the joint, and threw him forwards. He lay for a minute or two unable to rise, until the sack was removed from over him. Within five minutes from the time that the blow was given, the leg became swollen to nearly double its natural size, and quite powerless. He felt no pain at first, but afterwards a good deal. When admitted, his right leg was swollen, as before mentioned, to nearly double its proper size. The whole leg, below the knee, presented the well-known purple and mottled appearance of ecchymosis; above the knee, it gradually shaded off into a fawn-colour, which reached nearly to the groin, on the inner side; not so high on the outer. Below the knee, the whole leg was tense, hard, shining, and cold as marble; above it the hardness, tension, and coldness gradually became less, and ceased entirely near the groin; below the knee, the sense of touch was entirely gone.

No treatment had been adopted previous to his coming here. A consultation was held on the case immediately after his admission, and it was decided to adopt merely expectant treatment, to support any returning warmth, and to wait until nature should show how much of the limb was beyond all hope of recovery, before any operation should be performed. The limb was enveloped in flannel, and a grain of morphia was given the patient at bed-time, and ordered to be continued for the present.

July 29th.—Just below the knee, there is some return of warmth, and he is sensible to touch as far as the ankle. He had retention of urine, and his water was drawn off.

30th.—Sensibility had returned in the great toe.

31.—The feeling of the second, third, and fourth

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toes had returned; but there is none in the little toe.

From this date till August 4th, the sensibility and the temperature remained about the same, and at the latter date numerous vesications were forming below the knee; and by the 14th, the whole of the lower leg, with the exception of a small portion on the upper and inner surface, was converted into a gangrenous mass, and the separation of the dead from the living structures fairly began. Charcoal poultices were kept constantly applied, to diminish the fœtor.

Sept 7th.—The knee-joint is completely opened from behind.

10th.—Mr. Cooper amputated the limb about the middle of the thigh. After the operation, the amputated parts were examined; the lower leg, with the exception of the portion before mentioned, was converted into one disorganized and putrid mass. The cartilage covering the condyles was beginning to ulcerate, in consequence of its exposure to the air, and the greater part of the ligaments had sloughed. Above the condyles, where the line of separation had been, all the structures were blended into a hardened mass, covered by granulations. The upper ends of the artery, vein, and nerve, were found in the line of the lower flap, and traced from that point to their terminations in the granulating mass, which formed the lower boundary of the sound parts on the back of the leg. The artery was quite pervious to within a little more than a quarter of an inch of its lower extremity, which space was occupied by a firm, fibrinous coagulum. To within the same distance from its end, the coats of the artery appeared healthy, and presented no trace of any atheromatous deposit. Near its end the coats became softer and more fragile than natural, deeply injected, and at the inner side the internal coat was separated for a short distance from the other. At its termination, the artery was slightly contracted around the coagulum. The lower extremity of the vein could not be so distinctly made out; it was slightly narrowed at about an inch before its end, then returned to its natural calibre, and finally became narrowed, and at its extremity could not be distinguished clearly from the mass of granulations in which it lay. Immediately beneath the inner coat of the vein, lay a narrow coagulum, extending upwards for more than an inch. The nerve ended in a bulbous extremity, with some ragged-looking processes extending from it, having all the appearance of the fasciculi of a nerve torn across, and separated from each other. The bulbous extremity of the nerve was much harder than the healthy portion, and where cut across, presented a denser and more uniform surface than the rest. In this dense mass several funiculi could be seen terminating in bulbous extremities.

From these appearances, I think, it may safely be inferred that the injury caused by the blow was a rupture of the artery, with some laceration of the coats of the vein, as evidenced by the clot lying beneath the internal coat; and I should think, from the look of the end of the nerve, that it too must have given way. The diagnosis of rupture of the artery was first considered the most probable, from the immense amount of swelling and tension, evidently due to the effusion of blood, and only to be accounted for by the rupture of some large vessel. Rupture of the nerve was not considered probable until the dissection of the parts offered evidence of this lesion having taking place. The partially restored sensation in the limb could be fully accounted for by the supply of nervous branches from the musculo-cutaneous and long saphenous, the trunks of both being out of the way of injury. I am not aware that I have ever seen any record of a similar case to the one which I have just recorded; and in order to account for an injury so extensive, we must take into consideration the peculiar position of the man's leg at the time of the accident, the whole of the back of the limb being in a state of the utmost tension possible, and the sack (no inconsiderable weight) falling so as to strike just below the knee: thus exerting an immense force on structures already stretched almost to their utmost limit, and causing laceration in those that were least yielding. Sir G. Ballingall, who saw the case after the amputation, mentioned that he had seen both artery and vein torn across without any injury to the nerve.

The most important consideration arising from this case is, whether it would not be better, under similar circumstances, to amputate immediately, and thus to save the patient the confinement, pain, and exhaustion, caused by waiting till nature has nearly completed the division of the living from the dead portions.

GENERAL HOSPITAL, BIRMINGHAM.

[Reported by Mr. Oliver Pemberton, House-Surgeon.]

Bite of the face by the common Adder, followed by vomiting, diarrhœa, and extreme general prostration; Re-action induced by large doses of ammonia and brandy; Diffuse cellular inflammation; Recovery.

Samuel S———, aged thirty-one, a vermin hunter, was brought to the General Hospital, Birmingham, on Sunday, June 16th, 1850, at twelve o'clock at noon, having been bitten on the cheek by an adder. It seemed that on the Thursday preceding, whilst engaged at a farm-house on Coleshill-heath, destroying rats, his dog found the reptile on a bank. He picked it up, placed it in a small bag he had with him, and carried it home. He handled it freely on several occasions, and it never attempted to bite him. On Sunday morning at about ten A.M., having taken the creature out of a box, in which he had kept it, he proceeded to carry it in his hand to a neighbour. On the road he was asked to show it, and raising his hand in order the better to display it, the reptile darted suddenly and fastened on his left cheek, about half-an-inch above the angle of the mouth, thence dropping on the ground. He immediately picked it up again, replaced it in his handkerchief, and on arriving at his neighbour's the adder was killed. He described the bite as being instantly followed by acute pain and by a burning sensation of heat and tumefaction. He experienced also nausea and faintness in his walk to the hospital.

Upon his admission the entire face presented a swollen appearance, and the parts immediately adjacent to the bite were discoloured, of a livid hue. The pulse was imperceptible, the respiration difficult, the surface close and clammy. He complained of intense pain about the umbilicus, greatly augmented on pressure, and there was constant vomiting of bilious matter; he appeared wandering as if drunk, and answered questions in a mumbling incoherent manner. The bowels acted frequently and involuntarily, and both blood and mucus were mingled with the motions. He also complained of pain in the throat, and there was some difficulty in deglutition. On examination, a copious secretion of viscid mucus was seen to be adherent to the pharynx. With the approval of Dr. Evans, who happened to be present in the hospital at the time of his admission, a glass of brandy was immediately given him; the bitten parts were then excised by Mr. Blake, who was acting as house-surgeon in my absence, and freely cauterised by a strong solution of ammonia. Dry cupping was afterwards resorted to, and the parts were well smeared with olive-oil. The pain and swelling of the parts still continuing, he was ordered the following mixture: Sesquicarbonate of

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ammonia one drachm and a half, decoction of cinchona eight ounces. One ounce to be taken every half-hour. Three glasses of brandy directly, a tablespoonful to be given every ten minutes. A mustard cataplasm was applied to the abdomen, and kept there for half-an-hour, followed by fomentations of camomile and poppies.—Half-past one P.M.: The pulse is still imperceptible, and the pain unrelieved. He appears to be sinking, and sickness and diarrhœa continue, together with great thirst.—Three P.M.: The pulse may now be felt, and the pain about the umbilicus is considerably intigated. Ten leeches to be applied immediately to the part painful.—Eight P.M.: Pulse 84, soft and compressible; the sickness has ceased; the pain after the application of the leeches is much relieved; two glasses of brandy this night; an ounce of the ammonia mixture every second hour.

June 17th.—Ten A.M.: Progressing favourably.—Two P.M.: Diffuse cellular inflammation of an erysipelatous character has rapidly extended itself from the wound to the neck and sternum, and to the opposite side of the face; the pulse is hard, 98; the skin hot; the tongue coated with a white fur. To take five grains of calomel, and ten grains of Corbyn's extract of colocynth immediately, and one ounce and a half of the hospital aperient mixture, until the bowels are freely evacuated. Twenty leeches to be applied to the face and upper part of the sternum. The brandy to be omitted.—Evening: Copious, dark, and watery motions have taken place; the pulse is 104, full, and incompressible. A spirit lotion to be kept applied to the face. The mixture of ammonia and cinchona to be continued.

18th.—Much improved; the erysipelas is not spreading. The pulse 98, compressible; the tongue covered with a white fur, but moist; the skin warm; the bowels have again acted freely.

19th.—Erysipelas declining; he can partially unclose his eyes; pulse 90; soft and compressible. The parts adjacent to the bite are assuming the departing and varying hues of an ecchymosis.

20th.—Goes on well.

21st.—He complains of pain and soreness in the chest. All febrile symptoms have disappeared. Half a pint of ale daily, with meat.

He left the hospital on the 28th. A slight yellow discoloration remained upon the cheek; his general health was quite restored.

It is interesting to compare the above case with the one I placed upon record in THE LANCET about two years ago. They both agree in what appears to be an important particular—namely, in the rapidity with which the bite was followed by its characteristic symptoms. For I believe it to be true, that the severity of these symptoms is greatly regulated by their period of accession, and we notice, especially in these cases, that the burning and smarting instantly followed the receipt of the injury. Now in Paul D——'s case, the one above alluded to, extravasation of blood into the cellular membrane of the arm was the manifest feature; but in this of Samuel S——, after the recovery from the first effects had with imminent danger to life taken place, diffuse cellular inflammation of a large surface of the body suddenly came on; as if (which I believe to be the case) a specific condition of the blood remained after the heart had recovered from the primary influences of the poison. For what, let me ask, could there be in the nature of the wound likely to induce such an attack, were not the blood circulating throughout the body in an altered state?

It is not often that we hear of symptoms, following the bite of the common adder, of so dangerous a character to life as those detailed in the above case. Indeed, so desperate appeared the patient's chance of rallying from the primary prostration, that Dr. Evans, on leaving the hospital, left with the impression upon his mind that the case would have a fatal termination. Hence the value and importance of large doses of ammonia, and the almost unlimited exhibition of brandy, cannot be too much insisted upon, to induce a reaction capable of overcoming the depressing effects of a poison sometimes so malignant as this appears to be; whilst the practitioner should also be on his guard, lest diffuse cellular inflammation or erysipelas bring his patient to a less favourable termination than the one it is our good fortune here to record. I may add that the adder was of unusual size, measuring twenty-five inches and a half in length.

BATH UNITED HOSPITAL.

Surgical Cases.

[Under the care of Mr. NORMAN, Mr. GORE, and Mr. BROWN.]

WE beg to offer to our readers a succinct account of a few cases and interesting surgical facts with which we became acquainted in paying a short visit to this hospital.

In the out-patients' department, we perceived a child about two years old, the whole of whose right cheek was invaded by an erectile tumour, the latter being far too large to permit of an attempt at removal. The eye was almost closed, and Mr. Norman, under whose care the patient was placed, was trying a plan which we have seen put in practice at St. George's Hospital—viz., to promote by setons, not so much suppurative as adhesive inflammation. The frightful hæmorrhage which almost certainly ensues when excision is tried, precludes any idea of using the knife; but such tumours are sometimes treated by tying the main arterial trunk, this operation being especially resorted to in cases of erectile tumour of the orbit. In a case at St. George's lately, the erectile tumour was situated in the upper lip; Mr. Hawkins used the setons, and after several months the abnormal growth was much diminished.

Mr. Gore lately had a case of subclavian aneurism, which would tend to show that in similar cases it is important to operate early. Mr. Gore tied the subclavian artery, and it is probable that the patient would have progressed favourably had not the aneurism become diffuse. As to the operation itself, Dr. Harrison says, in his work on the Arteries: "As yet the records of surgery do not furnish many cases of success attending this operation; they are, however, sufficiently numerous and satisfactory to prove, not only the practicability of the operation, but also its expediency in many cases of aneurism." Dr. Harrison is likewise favourable to *early* deligation: "The operation ought not to be delayed; and as soon as the surgeon sees that the disease is fully established, and that it is increasing, he should recollect that delay is dangerous, and that if the operation be performed early, there is no peculiar reason to dread an unfavourable issue." Mr. Druitt states in his "Vade Mecum," that Mr. Partridge tied the right subclavian in 1841; the patient died four days afterwards, apparently from irritation of pneumo-gastric nerve.

We perceive that Mr. Norman is favourable to early operation in cases of strangulated hernia; in commenting upon a female patient just recovering from an operation for strangulated femoral hernia, we heard Mr. Norman state that if reduction cannot be effected after about one hour's trial, every subsequent hour before the operation is a great loss to the patient.

Mr. Brown had lately under his care one of those cases which have recently caused much discussion in France—namely, the rupturing of the connecting

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substance of an anchylosed joint, to obtain a better position for the limb. M. Bonnet, of Lyons, has advocated the division of tendons and muscles about the knee-joint, and breaking the callus to bring a leg bent at right angle into a straight position. Semi-successful cases have been adduced. For the arm, the flexed position seems to answer best; we saw, however, an agriculturist at St. Bartholomew's Hospital, under the care of Mr. Stanley, with a stiff elbow-joint, the forearm being in a straight line with the arm; and the patient stated that for all *agricultural* purposes he found his arm extremely useful.

Mr. Brown's patient, a boy about ten years of age, had suffered, in the country, compound comminuted fracture of the elbow-joint, and consolidation had taken place, with the jutting forward of the displaced head of the radius, the whole limb being fixed in a straight line. When Mr. Brown saw the boy, whose arm in the then state was almost useless, he resolved to remove the head of the radius, and bend the arm. This was done, the connecting substance easily gave way, and the boy had a good recovery, with a properly flexed and anchylosed arm.

On the 31st of July we saw Mr. Norman amputate the forearm of a woman of sixty-eight, for diseased carpus. The bones had run into caries, though no fistulous tract communicating with the external surface had been established. It was rather remarkable that in a subject somewhat advanced in years a mere strain had brought on the disorganization of the wrist-joint, whilst such pathological changes are unfortunately not rare with the young.

Amputation is no doubt the proper course in such cases. We were present, however, on the 16th inst., when a great effort at conservative surgery was made by Mr. Fergusson, at King's College Hospital. In a case of diseased wrist-joint, Mr. Fergusson excised all the bones entering into the articulation, leaving the hand attached by the soft parts only. We shall soon have the pleasure of reporting the case in detail. We should not omit to mention that Mr. Gay, at the Royal Free Hospital, has obtained, in several cases, cicatrization and anchylosis by free and deep incisions into the joint, the parts being largely laid open, and then granulating from the fundus of the wound. We shall soon have to recur to the subject.

At the Bath United Hospital, the dressing of the wounds made at operations is of great simplicity: the flaps are kept together by sutures, and no application made but that of wet lint. The surgeons of the institution have found that this mode of treating wounds conduces with more certainty to cicatrization than the many other ways which have in turn been advocated.

We shall conclude this cursory sketch by mentioning one of those cases of ovarian dropsy which so often puzzle the pathologist. Mr. Norman had lately operated in a case of ovarian tumour, with a view of removing the cyst; but the adhesions were found so numerous and so firm, that the wound was closed without attempting the removal. Strange to say, the tumour from that time went on diminishing, and has since completely disappeared. We did not hear whether there had been any very large amount of urine evacuated, either suddenly or at different periods.

CIVIL HOSPITAL, GIBRALTAR.

Reported by C. Tenerry, Esq., M.R.C.S., Eng., L.A.C., and Assistant-Surgeon to the Hospital.

Case of Lithotomy.

Pasqual A——, aged sixty, by birth a Neapolitan, and by occupation a ferry-boatman, a stout and robust man, was admitted into the Civil Hospital, Oct. 13, 1847, with symptoms of calculus vesicæ, from which he has been suffering for the last twelve months. He is also the subject of double inguinal hernia: the one on the left side has existed about five years, and that on the right side protruded suddenly, about two months ago, whilst straining to pass his urine. Dr. Rey and myself sounded him, and found he was the subject of a large roughened calculus, which we proposed to remove by an operation, to which he readily assented.

Oct. 17th.—He was placed on the operating-table, and his hands secured to his feet in the usual manner, when, after much difficulty, a staff, slightly curved at the point, was introduced into the bladder. I made the usual incisions in the left side of the perinæum, opened the membranous portion of the urethra, and carried the blade of a long-handled scalpel along the groove of the staff, somewhat lateralized, into the bladder. Dr. Rey introduced the forceps, and while drawing the calculus, it slipped, and some portion crumbled off. At the second attempt I was obliged to enlarge the wound, and the calculus was easily extracted. Some warm water was injected through the wound into the bladder, and a gum-elastic catheter secured in the urethra: after which, he was placed in bed, and took half a drachm of Battley's solution. —Ten P.M.: Has had some refreshing sleep, and said he felt very easy.

18th.—Six A.M.: Passed a tolerably good night, under the influence of a second dose of Battley's solution; skin cool; pulse regular; urine passes freely through the catheter, and also comes from the wound.

19th.—Took a dose of castor-oil, which produced several liquid stools; some fæculent matter escapes through the catheter each time he passes urine or has a motion.

Nov. 29th.—This day he was discharged quite fat and healthy. Fæculent matter comes through the urethra occasionally; and when he breaks wind, he does so partly through the urethra.

The calculus—lithic acid—is of a flattened, ovoid form, and studded with minute tubercles; its weight at present is 650 grains.

Dec. 23rd, 1846.—I occasionally meet the old man, who is quite well, and suffers no inconvenience from the occasional passage of fæces and flatus through the urethra.

I should mention that he inhaled ether from an inhaler for nearly three-quarters of an hour prior to the operation, without effect.

Case of Lithotrity.

Francisco D——, aged twenty-eight, admitted Oct. 2, 1849, under the care of Dr. Rey, surgeon to the hospital. He states that he has been suffering from stone in the bladder since childhood. On sounding him, he was found to be the subject of a large, rough calculus vesicæ.

Oct. 5th.—He was placed on an ordinary operating-table, the bladder was distended with warm water, and the calculus cleverly crushed three or four times, with very little suffering to the patient. Several fragments were discharged during this and the following day, which were evidently some of the tubercles of the calculus, the water being slightly tinged with blood. To drink linseed-tea, use warm hip-baths, and keep quiet.

7th, 11th, & 13th.—A second, third, and fourth operations, were performed, and at each discharge of the particles of calculus he suffered a little pain in the urethra and a burning sensation in the bladder.

16th.—This day the calculus was only broken once, and the whole of it came away. He never had the least accession of fever, and was all the time in a cheerful mood.

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The particles weighed two drachms and a half, and proved to be oxalate of lime.

December, 1850.—Up to the present time he continues his duties as a servant, and experiences no inconvenience.

New Inventions

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

The Mesopodium or Saddle-Stick. By T. Twining, Esq., jun., Perryn House, Twickenham.

Mr. Twining has forwarded to us the following particulars respecting his invention; and we have no doubt that it will prove of great value for the purposes for which it is intended:—

The invalid emerging from a long confinement to his couch may truly be said to appreciate more the blessing of being able to get about with the assistance of crutches, than a person in good health does the full enjoyment of his limbs. The object of the mesopodium is to place this within the reach of many who have not yet attained the degree of convalescence usually required, and of many indeed who could perhaps never expect to attain it.

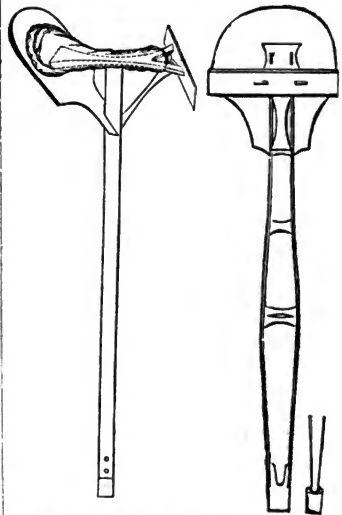
In order to use crutches with comfort, it is requisite that the invalid should have strength enough, either in one leg or in the two together, to bear the whole weight of his body whilst he brings forward his two crutches *simultaneously*, otherwise he is obliged to bring them forward *alternately*, whilst he hangs with nearly his whole weight, first on one shoulder, and then on the other, in a manner at once fatiguing and injurious. This is entirely obviated by means of the simple apparatus proposed, on which the invalid rests comfortably seated, although perfectly erect in posture, whilst he brings both his crutches forward.

It was towards the beginning of 1842, that I was induced, by that necessity which is truly said to be the mother of invention, to make my first attempt in this mode of progression; but it was not till 1844 that I hit on the idea of obtaining a comfortable approximation to the shape of a saddle, by the very light and simple means of a small oblique board, as exhibited in the accompannying drawing. (Fig. 1.)

It will be noticed that, the supporting stem does not consist of a single straight stick, but of two thin slips of wood curved to suit the form of the legs, (Fig. 2.) Besides the advantage of rendering the apparatus less unsightly, it is astonishing what light and slender slips are found to be, in this way, perfectly adequate to support the weight of the human frame.

If the wooden saddle is accurately shaped, it may be used even without stuffing, as figured by the dotted lines, Fig. 1; but I consider it preferable to add a little stuffing covered with velvet, as represented, which can be done without materially adding to the weight of the apparatus, which, when complete, does not weigh more than fifteen to twenty ounces. In consequence of this lightness, which is one of its most essential advantages, it is scarcely felt by the person using it: and the legs being slightly pressed against it, it follows their motions without any effort being required to keep it in its place, especially if a strip of velvet be fastened on the outside of each of the slips, with the nap downwards, so as to present a rough and somewhat adhesive surface to the cloth of the trousers.

I shall not for the present enter into the practical details of the use of the mesopodium, or enumerate the very great advantages which I have personally derived from it for the last five or six years; the former will be best understood, and the latter better appreciated, by seeing the apparatus used by some person who has acquired practice in the use of it; for in this, as in everything else of the kind, it is only practice that makes perfect.



It will then be at once perceived that the use of the saddle-stick, either in its present form or with such modifications as will readily suggest themselves, is applicable to many cases in which the limbs are incapacitated for bearing their natural burden, either by the effects of accident or by disease.* It will further be perceived that the patient may rest just as much or as little of his weight as he pleases on the artificial support thus afforded him; and this is a consideration of no little importance, for provided there be healthful tendencies, and if nothing unfavourable should intervene, the chances are that a judicious apportionment of the amount of effort to the amount of strength, and a very gradual and cautious increase of exercise, will most essentially conduce to the progress of his recovery. Day by day he will rest more on his limbs and less on their artificial coadjutor, till the time comes, not for kicking away the mesopodium, but for laying it aside to be gratefully preserved as a memento of some of the most soothing of human enjoyments—those of convalescence.

* In cases of spinal debility, which would preclude the use of crutches in the common way, two straps passing over the shoulders may be fastened to the saddle part of the mesopodium before and behind, with buckles in front, to allow of lengthening or tightening at will.

New Portable Hydro-Electric Chain Battery.

This is a new invention, consisting of a perfect galvanic battery, in the form of a chain, which is contained in a morocco-box, the ordinary size of a pocket-book, invented by Pulvermacher, of Vienna, and manufactured in this country by Mr. Meinig, of Leadenhall-street.

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It contains the whole metallic combination of a voltaic pile, being composed of copper and zinc wire, wound round grooved pieces of wood, requiring only its immersion for a moment in dilute acetic acid, to produce most powerful galvanic action for two or three hours; a re-immersion at the termination of that period continues its power. There is connected with it a small clock-work, which makes and breaks contact in a most perfect manner.

The advantages which the medical practitioner can obtain from an instrument in so small a compass as to be able to carry it in his pocket, cannot be too highly esteemed, enabling him, as it does, to apply galvanism in the quickest and most efficient manner to any part of the human frame; thus superseding the cumbrous battery now in general use for therapeutic purposes. There are also smaller chains, which may be worn round the body or limbs, the ends requiring to be fixed by means of two buckles to an elastic band, so that a current of a mild and continuous nature can be passed through any part wished. By this arrangement the long-desired continuous current, of a mild nature, is obtained, instead of the more acute effect of the direct shock, which in many cases would be prejudicial.

It is probable that the apparatus will render galvanism of much benefit as a curative process.

This invention really merits the warmest commendations.

Foreign Department.

A New Treatment of Prolapsus Uteri.

M. Desgranges, surgeon to the Lyons Hospital, has laid before the Academy of Medicine of Paris a new mode of remedying the uterine displacement. It consists in pinching up the mucous membrane of the vagina, after reduction, with little forceps, or serre fines of Vidal. The forceps produce ulceration, and fall off from the fifth to the tenth day; and M. Desgranges repeats this operation eight or ten times, taking care always to leave as many of the forceps as possible. At the commencement of the treatment he introduces as many as nine; later, from six to four; and at last, towards the end, only one of the little instruments. The treatment lasts in general two months and a half, or three months.

It will be seen that this method rests on the fact that the narrowing of the passage may prevent any further descent of the organ, the loss of substance and cicatrization being instrumental in the result. M. Desgranges adduces three cases in support of his views, and the operation might at first sight be looked upon as holding out a fair chance of success; but it should be borne in mind, that by the coarctation of the canal, none of the weight of the displaced body is diminished; and that constant pressure from above may certainly conduce to the elongation of the cicatrices.

For assisting the memory of our readers, we shall just transcribe the various analogous operations which have been proposed, as given in a very good article of the *Bulletin de Thérapeutique*:—

"1. Excision of a few folds of the vaginal orifice, as practised by Dieffenbach, in imitation of Dupuytren's mode of excising some folds of the margins of the anus in prolapsus of the rectum.

"2. Excision of a broad longitudinal flap of the mucous membrane of the vagina, either elliptical (Dr. Marshall Hall) or square (Dr. Ireland,) and the immediate apposition of the lips of the wound by suture.

"3. Cauterization of the mucous membrane, so as to harden the tissues by suppuration, and obtain union between the walls of the vagina and the surrounding organs (Laugier.)

"4. Excision of a semicircle of the vaginal orifice, and immediate apposition by suture, in acting either on the anterior or posterior circumference.

"5. Episiorraphy, practised by Fricke, of Hamburg. This consists in paring the inner surfaces of the labia majora, and bringing them together by suture.

"6. Complete obliteration of the vagina, proposed by M. Romain Gerardin. This operation has never been practised upon the living subject, and could hardly be thought of before the cessation of the catamenia."

Tetanus treated by Chloroform Frictions.

L'Union Médicale states that M. Morisseau, surgeon to the hospital of "La Flèche," succeeded in saving a patient seized with tetanus, by using frictions of chloroform all over the body. M. Morisseau had, in two cases previously treated, tried, in one venesection and opium, and quinine in the other; both had failed; and he had thus been induced to make attempts with chloroform. A few acidulated vapour-bathis, and frequent frictions with the anæsthetic agent, brought on recovery in the space of four days.

Hernia of the Iris; rapid Retraction by the Use of Atropine on both Eyes.

The *Philadelphia Medical Examiner* mentions a case of wound of the cornea, under the care of Mr. Morehouse, where the iris was herniated. Attempts at reduction were made by touching the prolapsed iris with a solution of atropine, (five grains to the ounce of distilled water,) but with little result. Mr. Morehouse then thought of taking advantage of the consentaneous action of the two irides, and applied the solution to both eyes. This method succeeded at once, the iris retreated, and the wound of the cornea soon healed up.

Peruvian Bark in Algeria.

Jesuit missionaries in Peru have lately sent saplings of the cinchona tree to some of their community who are farming in Algeria, and trials will be made to cultivate the tree in the French colony. Douhts are entertained as to the success of the attempt.

Dr. Marshall Hall before the Academy of Sciences of Paris.

At the meeting of the 28th of July, 1851, a paper of Dr. Marshall Hall was read: On muscular irritability in cerebral and spinal paralysis. The paper closes with the enunciation of the following facts: 1. There are cases of paralysis where the muscles of the affected limb contract under a less degree of the galvanic influence than those of the sound limb. 2. The contrary takes place in other cases—the muscles of the sound limb are then more sensitive than those of the affected side. 3. In these cases the influence of the brain, or that of the spinal marrow, is respectively intercepted. 4. The removal of the influence of the brain conduces, within certain limits, to a comparative irritability of the muscular fibre; whilst the reverse is obtained when the influence of the spinal marrow is taken off. 5. This difference in the degree of muscular irritability is to be looked upon as a diagnostic sign in cases of cerebral and spinal paralysis. 6. An apparatus which yields a simple and slight current, is alone capable of showing this difference; and this apparatus, to the exclusion of those which give a current often repeated and of great intensity, is the only one which can be used for the purposes of diagnosis.

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Internal Strangulation.

A discussion arose, a little time since, in the Surgical Society of Paris, on the method of treatment to be adopted in cases of obstruction from internal strangulation of intestine. The main question was whether it was desirable in such cases to establish an artificial anus in the groin. M. Nelaton, the new professor of clinical surgery at the Faculty, was in favour of the operation: he had himself operated in this manner twice, and had succeeded once. M. Denonvilliers had likewise had a successful case, and it was contended by the two latter surgeons that this mode of treatment was the only one which gave the patient a chance of escaping a fatal issue.

This opinion was warmly combated by several speakers, who stated that the portion of small intestine thus opened might be too near the duodenum, that the artificial anus was a distressing complication, and that it would be better to search for the strangulated intestine within the abdomen.

M. Maisonneuve proposed an operation which no doubt will startle our readers. It consists in no less a feat than *implanting* a portion of small intestines upon the colon, the intermediate piece being altogether shut out from the circulation of the chyme. The author conceives that this obstructed portion of intestine would receive the fæcal matter, but that the latter would be driven back again by an antiperistalic motion. M. Maisonneuve stated that he had made *numerous* experiments upon animals, (we hope he did not omit to give them chloroform,) and that they all perfectly recovered.

Luxation of the Crystalline Lens.

M. Larrey (son of the renowned Baron) lately presented to the Surgical Society of Paris a boy of thirteen, whose left eye presents a displacement of the lens. The patient has very imperfect sight, the lens is lying in the anterior chamber, and is perfectly transparent, in spite of the luxation; which circumstance is somewhat rare. The lens can easily be replaced, but the dislocation is immediately reproduced.

Luxation of the Vertebræ reduced, under the influence of Chloroform.

M. Maisonneuve has just had the following case at the Hôpital Cochin in Paris. A girl, fifteen years of age, had felt a sudden cracking in the cervical spine, after a rather violent rotation of the head, and she had at once lost the power of bringing back her head into the normal position. It was firmly turned towards the right shoulder, the sterno-mastoid muscle of the same side being in a completely relaxed state.

M. Maisonneuve immediately thought that this was a case of incomplete luxation of the vertebræ, and rather than leave the case to nature, as advised by some surgical authorities, he attempted the reduction in the following manner, especially as the accident had occurred only twenty-four hours previously.

The patient was rendered insensible by chloroform, and when she was quite narcotized, M. Maisonneuve seized her head, the palms of the hands resting against her lower jaw, and raising the whole head, as for making extension, (counter-extension being effected by the weight of the body,) he turned the head forcibly from right to left, and without difficulty fixed it into its proper place. The movements were afterwards perfectly normal and easy.

False Aneurism of the Brachial Artery Cured by Galvano-Puncture.

M. Amussat has related the following case before the Academy of Medicine of Paris:—A butcher, thirty-five years of age, wounded the internal and lower part of the arm with a penknife; the artery was injured, compression used, and seventeen days afterwards the man was sent to M. Amussat with a pulsating tumour, the size of a hen's egg, on the spot where the wound had been inflicted.

M. Amussat, relying on the accounts published by M. Petrequin, of Lyons, tried galvano-puncture in the following manner:—

Two fine platinum needles, covered with gum-lac over that portion which was to be in contact with the skin, were introduced into the tumour, and the poles of a trough of thirty compartments brought into contact with the needles for the space of five minutes. The couples were gradually increased to twelve, and after five more minutes (giving altogether ten) the needles were withdrawn, because the patient was in great pain.

Lead wash was then applied to the tumour: no unpleasant symptoms occurred, and three days afterwards the aneurism presented pulsations over an area the size of a five-shilling piece. Four needles were now introduced; this sitting lasted sixteen minutes, and the couples were increased to sixteen. The same dressings were used as before, and in four days the tumour was found smaller, harder, presented no pulsations, and had assumed a brownish colour. The swelling diminished in size from day to day, the pulsations never returned, and the cure may be looked upon as quite complete, as M. Amussat presented the patient to the Academy in July, 1851, whilst the operation had been performed on the 13th of October, 1847. After almost three years the value of such a case has very naturally remarkably increased.

Early Viability.

A lady, aged thirty-five, was confined, two months and seventeen days after having been driven over a rough road in a badly hung vehicle, of a very weak and small child; the whole extent of the gestation, calculated under circumstances very favourable to accuracy, had been exactly six months and ten days. The skin of the child was hardly formed or consolidated; there was no hair; the toes looked like a row of small pearls at the extremity of each foot, the fingers were so small that they were compared to lucifer matches; in fact, Dr. Ducos hardly thought the child could live.

As it seemed, however, inclined to swallow, toast-and-water mixed with milk was given. For the first ten days only, two tablespoonfuls of this fluid were given daily, the child being always kept close to the fire. When two days old the infant took the breast, but it stopped at every second act of suction, and these were so feeble that the mother hardly perceived them. She was therefore obliged to procure another child to empty the breasts. In this weak state the little creature continued until the time which would have been the natural term of gestation, without increasing much in size, but little in weight. Six weeks after this time it began now and then to smile, being then full four months old, and has since been thriving satisfactorily.—*Gazette des Hôpitaux.*

Inutility of the Bile as a Modifying Agent in Digestion.

M. Blondlot gives it as his opinion, before the Academy of Sciences of Paris, that the bile exercises no chemical action on the chyme, and that digestion would proceed just as well without the interference of bile. He considers the latter fluid as a kind of detritus, of which the economy frees itself by means of the intestines.

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M. Blondlot has been at great pains to set up biliary fistulæ upon dogs, so as to allow the bile to pass out of the body without reaching the intestine. After many trials he succeeded upon two dogs; one of these was killed one month after the establishment of the fistula, and it was found that digestion had been properly carried on, and that the ductus communis choledochus was already occluded.

The second dog lived *five years* with the fistula; it was a bitch, about four years old, who continued to enjoy good health, littered every year, and was a good pointer. The bile escaped all this time; very scantily, however, when the animal was fasting, but very abundantly during the whole period of digestion. The bitch died after five years; the liver looked cirrhosed, and the ductus communis was quite atrophied. M. Blondlot, therefore, maintains that the bile is a mere detritus, which may, however, serve to protect the intestines from the irritating properties of the chyme, or aid, with other mucous fluids, in dissolving fatty constituents.

A modification in the Operation for Hare-lip.

M. Coste, chief surgeon of the Hôtel Dieu of Marseilles, has been endeavouring to devise the means of obviating the ugly notch which too often remains after the operation for hare-lip. M. Coste states that the modification proposed and practised by M. Malgaigne is only applicable in double hare-lip, and that in the simple deformity M. Malgaigne's method produces an unsightly prominence.

The author, in simple hare-lip, (which lies generally on the left side,) has succeeded in avoiding the notch altogether, by cutting a horizontal flap in the red part of the lip on one side, and a kind of half mortise on the other. In paring the margins of the fissure, he takes off more substance than is generally done; the flap and mortise are well secured by twisted suture, and by one of the diminutive spring-forceps called "serre fines;" one transverse needle is placed a little higher up, and no application whatsoever made, so that the progress may be more accurately watched. M. Coste has thus succeeded, upon a little boy, twelve years of age, in completely avoiding the above-mentioned notch.

Chloroform for the extraction of Teeth; Death.

A lady, thirty-six years of age, of a bilio-sanguineous temperament, who had had three children, and whose health had always been satisfactory, was very much troubled with toothache. She had had four molar teeth extracted in the same sitting six or eight years previously; after which operation she had been seized with a convulsive fit. A little while ago the toothache became very distressing again, the patient had several nervous attacks, and was tormented with the idea that her dental pains exposed her to much danger.

She sought the advice of a practitioner, and consented to a new extraction, stipulating, however, that she should take chloroform. Her husband held her hand, whilst her head was leaning against her maid; but before she had inhaled any chloroform, she started up, and attempted to run away, using very incoherent language. When a little calmer, she sat down again, and a cloth, upon which a little less than two drachms of chloroform had been poured, was placed before her mouth and nose. The patient soon pointed out, by a few words, that the chloroform was beginning to take effect, and then became insensible. The operator extracted three teeth with the greatest promptitude, and only stopped when the husband directed his attention to the patient, who seemed to have fallen into an extraordinary state. On close examination, she was discovered to be quite dead, and the best directed efforts were fruitless in reviving her.—(Dr. Essen in *Gaz. Med. de Strasbourg.*)

Experiments on the effects of Nicotine.

This alkaloid, which has acquired some renown from the crime and execution of Count Bocarme, in Belgium, was administered to various animals by M. Vleminckx, of Brussels. The following results were obtained:—

1. One drop killed a sparrow in twenty-five seconds. 2. Half a drop destroyed another sparrow in forty seconds. 3. Two drops killed a cock of large size in forty seconds; the same effect being produced in a minute, by the same doze, upon a rabbit. 4. A small dog died in two minutes thirty seconds, after taking two drops of nicotine, dissolved in ten of sulphuric ether. 5. Four drops, in the same menstruum, killed a cat in three minutes. 6. One drop was placed on the conjunctiva of a middle-sized dog: vertigo, weakness, and trembling ensued, and the cornea became hazy and rough. After six minutes he recovered. Two drops were then put upon the tongue of the same dog: he soon fell, after tottering about, and eventually recovered. Another and larger dog had ten drops: the symptoms were of the convulsive character. Vinegar was poured down his throat, and he regained his powers soon afterwards, though he threw up the vinegar.

The inspections proved that the most constant pathological changes were, congestion of the vessels of the pia mater, and especially a very intense congestion of the lungs.

New Application of the Inhalation of Chloroform.

M. Guisard, doctor of medicine, and member of the French Assembly, has written to *L'Union Médicale*, to state that his son, about three years of age, and affected with phimosis, had just been relieved from very distressing symptoms by inhalations of chloroform. It appears that the little patient experienced great agony in passing urine, and the distress was so great that he overcame the necessity of performing this function, and obstinately refused to relieve his bladder.

He was placed under the influence of chloroform, so that the phimosed prepuce could be incised, and hardly had its effects taken place than the urine began to flow, and the rectum was emptied. The next day, the child was equally obstreperous, and the same means brought about the same results. M. Guisard thinks that these facts may open a new path for the treatment of retention of urine or of fæcal matter.

Catheterism of the Fallopian Tubes in Ovarian Dropsy.

The *Boston Medical and Surgical Journal* for May, 1851, contains the account of a case treated by Dr. Cartwright and Dr. Warren Stone, of New Orleans, in which the contents of an ovarian cyst were apparently evacuated through the Fallopian tube. The case was one of large ovarian tumour of the left side of the body in a young married lady. The disease had resisted all attempts at retarding its growth, and in the early part of 1850 the operation of ovariotomy had nearly been resolved upon. Dr. Cartwright at this time (March 18th) resolved to try catheterism of the left Fallopian tube. He describes that after passing two or three gum elastic catheters of various sizes into the cavity of the uterus, no difficulty was experienced in passing the extremity of the catheter into the *ostium uterinum* of the tube. The catheter used contained a wire, and was flexed like the male

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catheter: and when introduced into the uterine cavity, the wire was withdrawn about half an inch, so as to make the point of the instrument more flexible, and enable it to be directed towards the tube. The instrument was passed into the tube about an inch, and then withdrawn; it was found to be followed by a gelatinous substance, which was recognized to be a hydatid formation. The same catheter was afterwards passed into the Fallopian tube until it had penetrated it three inches, and it was then moved about in the tube, which appeared to be enlarged into a cavity. On withdrawing it again, a semi-membranous tenacious substance presented itself at the os uteri, seeking an exit, but too thick and glutinous to pass freely. Finding it too soft and yielding to be drawn away by the forceps, a little raw cotton was passed around a probe, so as to entangle the viscid substance, and by turning the probe, the stringy matter was pulled out of the uterus in long mucilaginous ropes. The supply seemed to be inexhaustible. The patient being much fatigued, this procedure was suspended, but the matter continued to be discharged for about a week or more. In the mean time, the tumour was reduced to less than half its former size, and grew softer and less painful. The catheterism of the Fallopian tube was repeated on the 3rd of April and on the 1st, 7th, and 13th of May. At the last operation no discharge followed, but it continued to pass as at first for many days, upon the other occasions. Dr. Cartwright used a strong solution of nitrate of silver, by dipping the catheter in it before its introduction, but with what intention does not clearly appear. The patient is now described as being in good health, in New Orleans, and relieved of all signs of her former disease, except some fulness and hardness in the hypogastric region, which Dr. Cartwright attributes to former adhesions. He adds, that numerous cases have occurred in New Orleans, in which dysmenorrhœa and sterility have been cured by the Fallopian operation. In concluding his paper, Dr. Cartwright states the important point, that when the ovaries are in a diseased state, the diameter of the Fallopian tubes is considerably increased in size. Dr. Tyler Smith, in his paper on Catheterism of these organs, (THE LANCET for 1849) referred to a case in which ovariotomy had been performed with a fatal result, and in which the Fallopian tube corresponding to the ovarian tumour was largely dilated. We believe in this case copious discharges from the vagina had spontaneously occurred on several occasions, with the result of reducing the size of the tumour to a great degree. It is well known that in certain cases of ovarian dropsy mysterious discharges occur, unattended by symptoms of adhesion and ulceration, through the vagina or bladder. It would be well if in such cases the condition of the Fallopian tubes were ascertained. Is it possible that in cases of ovarian dropsy the fimbria can, during the catamenial periods or at other times of excitement, adhere to the walls of an ovarian cyst, and excite inflammation and opening of the cyst into the tube? We know that in menstruation the Graafian vesica is frequently perforated in this manner, and recent researches tend to prove that ovarian cysts are only diseased Graafian vesicles. At all events, the cases of spontaneous discharge in ovarian dropsy and ascites deserve more investigation than they have hitherto received.

A New Treatment of White Swelling, with Thickening of the Synovial Membrane.

M. LAUGIER, surgeon to the Hôpital de la Pitié, at Paris, has recently proposed in *L'Union Médicale*, to treat white swelling with fungous thickening of the synovial membrane, by making numerous punctures in the part with a lancet. This is to be repeated several times at various intervals, and M. Laugier states that this method has given him, in two cases, great hopes of saving the limbs. He does not, however, mean to put forth this mode of treatment as a secure and unfailing way of getting rid of the disease, but publishes his views in order to induce his professional brethren to make trials of his method. M. Laugier's plan certainly deserves some attention; we would, however, observe that Mr. Gay's method of making a deep incision into diseased joints has answered extremely well, as firm and satisfactory anchylosis (an end which M. Laugier has probably in view) has, in several instances, been obtained.

M. LEROY D'ETIOLLE'S *Twisted and Bent Bougies.*

M. LEROY D'ETIOLLES commends, in an article published in *L'Union Médicale*, his twisted and bent bougies in certain cases of stricture of the urethra. The author states that he has found strictures of a zig-zag direction, studded with prominences, and marked by sudden turns, which gave to the canal the form of a defile, with irregular and sharp narrowings. Several cases are mentioned where these bougies have found their way into the bladder, their extremities having almost the form of a hook. Several successful cases are mentioned, one of which was treated in conjunction with Mr. William Lawrence.

Treatment of Tuberculous Ulcers of the Testicle.

A very warm discussion has lately taken place at the Academy of Medicine of Paris, between the four most eminent surgeons of the day,—Messrs. Velpeau, Roux, Robert, and Malgaigne. The latter had submitted to the Academy a paper, wherein he proposes a new treatment of tuberculous ulcers of the testicle. This treatment consists in substituting the gradual removal of the ulcerated parts down to the testis, instead of having at once recourse to castration.

It will be seen that this method comes very close upon Sir Astley Cooper's and Mr. Syme's, of which it seems to be but a modification. The author was attacked upon points of diagnosis, therapeutics, &c., and he replied with his accustomed warmth and richness of language. His speech was a remarkable specimen of oratory, but it may be surmised that his adversaries adhere, nevertheless, to their opinions. M. Ricord opposed the operation, and, in his speech, (humorous, of course,) related two cases of double castration, where the genital functions were performed as usual; in the second case, the cerebellum was atrophied by the pressure of tubercles.

Lying-in Hospital of the Faculty, at Paris.

A change has lately been introduced at this hospital in the arrangements regarding new-born children. It had been observed that a great many lying-in women being assembled, *with their infants*, in one ward, the cries of the latter interfered materially with the rest of all the patients; it therefore occurred to the head midwife of the establishment to place all the infants away from their mothers, into a separate ward, where the little creatures are kept very cleanly, and have at once whatever medical assistance they may require.

There can be no doubt that rest is extremely advantageous to lying-in women, and that the atmosphere of a ward with so many mothers and infants must be prejudicial to the latter; but it may be questioned whether the frequent conveyance of sucklings to their mothers, both night and day, from one ward to another, is a circumstance free from risk to the infants. It seems, after all, much simpler to multiply

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the wards, and have them smaller, than part mother and child in the manner described.

Blennorrhagia in the Female.

We find, in the *Abeille Médicale*, a paper by M. HARDY, wherein he states that he treats blennorrhagia in the female in the following manner:—

As it is well known that cubebs have no effect on the vagina. M. Hardy gives this pepper in drachm doses at first, and increases by half a drachm a day, until the urine is well charged with the drug. He then begins injecting the vagina with the urine immediately after it is passed. An improvement is visible in three or four days; but if the injections be stopped, the discharge reappears. To make the cure quite certain, M. Hardy advises cauterizing the vagina with a strong solution of nitrate of silver; this he does at least three times. It may thus be conjectured that cauterization, much more than the repulsive injection, is instrumental in the cure.

A COUNTERBLAST AGAINST TOBACCO.

AMONGST the numerous indications of advanced civilization that strike every observer of modern English society, the more temperate habits of all ranks is not the least remarkable. This is a gratifying feature, and has materially tended to diminish crime and misdemeanour throughout the community. But however satisfactory the present moderation in the use of intoxicating drinks, especially by the upper classes, must appear, if compared with times not very remote, all will acknowledge another vice has recently become much more common than previously, which is quite as great an abomination. We allude to the augmented consumption of tobacco, particularly the custom of smoking that noxious weed now overrunning the land like a pestilence. These are strong words; but knowing the injurious effects tobacco produces upon the human constitution, both in body and mind, we feel impelled, as guardians of public health, to warn our countrymen of the dangerous consequences incurred, should they fall under the spell of this narcotic, which ought to be classed in the same category with opium—the great bane of eastern nations.

Ever since the first introduction of smoking into England, by Sir WALTER RALEIGH, the habit has been invariably condemned, excepting by its enslaved votaries. Various authors might be quoted in support of this opinion—nay, royalty itself has deigned to enter the lists of controversy, in the person of JAMES I., when he wrote "A Counterblast against Tobacco." AMURATH, one of the sultans of Constantinople, was also a decided opponent, and made it penal to smoke tobacco, on the plea that it diminished population. Again, in England, an edict was published, during the reign of Queen ELIZABETH, prohibiting its use; whilst even popes anathematized those of the faithful who presumed to smoke in churches. Besides these authorities, moralists, religious teachers, and aristocratic arbiters of fashion, have uniformly censured the custom as vulgar; and, like ardent spirits, all have viewed it as truly another form of dissipation. Into the evil consequences of this most objectionable practice, which every day becomes more general, especially since so many foreign visitors have arrived in the metropolis, space prevents our entering at much length; nevertheless, from our experience, and having often seen cases where serious disease was occasioned, chiefly, if not entirely, by the use of tobacco, we cannot do otherwise than denounce its employment. Irrespective, however, of individual illustrations, impartial searchers after truth need only look at the condition of those countries whose inhabitants have become Nicotian worshippers. Spain, at one time a great nation, has been as if paralyzed since Toledo brought the weed from America; Holland, instead of remaining the leading commercial state of Europe, has fallen very low in the scale, being now generally enveloped in fogs and tobacco-smoke, ever redolent of Schiedam; Germany, after being the cradle of the Reformation, and notwithstanding its sending forth many pioneers of modern learning, with its "SCHNAPPS, RAUCH, and STUBENOFEN," is now chiefly known as the hot-bed of mesmerism, homœopathy, water-cures, and various other modern, yet equally absurd fancies. Italy, the birthplace of CÆSAR, DANTE, and GALLILEO—three of the greatest intellects the world ever saw, but still the land of poetry, music, and song—has also fallen under the influence of the same benumbing plant; and lastly, our lively neighbours on the other side of "la manche," have, like others, become followers, in too many instances, of this filthy custom. Without going farther for proofs of these assertions, an inquirer need only walk along Piccadilly on shilling days of the Exhibition, from five to six o'clock in the afternoon, when hundreds, nay, thousands of bearded foreigners, may be seen on the tops of omnibuses, or filling the crowded streets, smoking cigars; of which they had been deprived during their stay at the Crystal Palace. The atmosphere thus becomes often so tainted, that, on regarding this strange scene, a spectator might almost believe he was in a Dutch or German Kaffee-Haus, were it not for the presence of horses, and the noise of carriages, which disperse the delusion.

How men of intellect and education, or those engaged in mental pursuits, besides persons frequenting female and well-bred society, can deliberately adopt such abominations, seems indeed surprising. Individuals who pass their time in physical labour, and only eat or sleep during the remainder, might perhaps be excused when occasionally giving way to such temptations; but for professional people, or gentlemen, to become devotees to such unseemly habits, is altogether inexcusable. Temperance leagues and kindred societies have been instituted, and often have accomplished much good, in their respective spheres; but seeing the principles of action influencing the above meritorious associations are involved in the motives which should prompt a crusade against the now more than ever prevalent use of tobacco, it is singular that parties advocating abstinence from spirituous liquids, and the disuse of sugar

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produced by the aid of human bondage, should not have already united their energies, in order to put down a vice which encourages the worst form of slave-labour, and also engenders a species of intoxication. This anomaly is however only one of the paradoxes met with in our free country, where some zealots will choke upon a gnat, after having swallowed an entire camel.

Although advantageous to many transatlantic brethren who extensively cultivate this poisonous plant; to shipowners, by whom it is brought to Europe; to our chicory Chancellor of the Exchequer, whereby his budget is most amply replenished; besides proving prolific in producing disease, and hence most profitable to medical practitioners; its attendant evil consequences are so numerous, that all right-thinking men must zealously oppose the spreading of a custom which fashion sanctions, but reason and experience strongly condemn. We sincerely welcome every foreign visitor now within these shores, trusting all may be pleased with their reception, and will see much which meets their approval, besides hearing the opinions entertained by intelligent Englishmen; whilst at the same time the denizens of Great Britain shall learn many things from their intercourse with strangers belonging to different climes. Expecting this result may supervene, and hoping the people of England will adopt whatever is really good in the manners peculiar to other lands, they ought never to disfigure the human face divine by those hirsute appendages, at present so often seen in London thoroughfares; and further, to quote the expressive although undignified words of King James, contained in his "Counterblast," they must not convert "their mouths into smoking, sooty chimneys." To do these things would be indeed making progress backwards, instead of following the onward movement of civilization. Much more might be easily advanced, and cogent arguments stated regarding the noxious custom here denounced, but it seems superfluous. We therefore conclude our remarks by saying, in the classical language of Camden—a great opponent to the use of tobacco—that the habit of smoking this weed may so seriously affect the physical and mental constitution of man, as to cause "*Anglorum corpora in barbarorum naturam degenerare.*"

QUACKLEDOM AND FRAUD.

All Quackledom is in rumour and alarm. The globulists of the Continent meet in Prussia to rejoice over their gains; those of England propose to meet in London to beseech our pity for their sorrows and their losses. In their oppressed and benighted native land, they hold on their course boldly under the protection of kindred quackeries in other things, but still with a strange feeling of a day of reckoning to come. In England the hour of doom has already struck, and they have no other refuge but, like the associated rogues, to appeal to feelings they have never respected. Before we listen to their appeal for liberty of opinion, they must wipe away the stains of their scandalous detractions, and show us that they have a single principle which deserves a moment's pause for consideration, or a single well-established fact on which reliance can be placed.

There seems to be a singular absurdity in these men seeking our confraternity, while they not only renounce and denounce our doctrines in public, but in the most malignant and scandalous manner revile us in private. Themselves alone could make us believe a thing so incredible and so disgraceful. But there is not a doubt of the fact; and instead of seeking a separate existence, as they would do if they placed any faith in their doctrines, and really sought their establishment with confidence in their truth; on the contrary, the more we repudiate them, the more they cling to us. They are plainly conscious that their respectability, such as it is, is only a reflected one. It is from us they derive what strength they have, even while they revile us. They denounce the science of medicine as false; we proclaim their doctrines and their pretended facts to be lies, and themselves, to use plain language, cheats. There can be no alliance which is not as unprofitable to us as it is dishonourable to them. For this reason we are determined it shall endure no longer; but for this very reason they cling to it the more, and on this account they are so much alarmed by the present movement, which annihilates them and their puerile pretences. They still, however, seek to perplex and confound the public, and for this purpose they set no limit to their baseness. They would be both Musselmen and Christians. With the dust of the Cathedral on their knees, they would worship in a Mosque. Teaching implicit reliance on globules, they employ behind the scenes the most dangerous and wicked means. Some, like a surgeon whose dishonesty was lately exposed, lend themselves to the vacillating humour of the public, and employ all means, having faith in none, and being probably as destitute of knowledge as of honour. Others thrust dangerous weapons into the womb and pour globules into the stomach. While Dr. Henderson, the Edinburgh professor, is willing, like the Vicar of Bray, to teach anything that will keep him in his place, or suppress anything which will bring him into risk.

An absurd patience led the rogues into a great mistake. We congratulate the profession on their alarm. Let them meet. Let the heathen rage. Let them tell us their numbers. We shall hardly be frightened. Let them tell us of what silken lords find leisure from rational pursuits to wheedle with homœopathy, mesmerism, and all the allied abominations. Let them tell us of what silly women take counsel with them; and above all, let them tell us of what doctors keep a false faith with us, and give them encouragement and advice. We are prepared for all these things, and will grapple with them without fear, even should we find Royal Highnesses and their medical advisers in the ranks of our enemies. They may be assured we shall go on to the end, fearing nothing.

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Dr. PARIS told us, at Brighton, that the College of Physicians only desired to know the wishes of the profession. We should have thought the College of Physicians might have aspired to lead instead of to follow. But they know our wishes now well enough. Let them grant such reasonable demands speedily, and let them be assured they will thereby secure to their ancient and venerated institution the affection and respect of every worthy member of every branch of our art. But we cannot live with the dishonest; we cannot abide with the loose. A day of reckoning for the dishonest is at hand.

MILITARY SURGERY.

MUCH misapprehension existing in civil life as to the nature and meaning of military surgery, we publish herewith the syllabus of a course of lectures on the principles and practice of military surgery, delivered in Dublin by Mr. JOLLIFFE TUFNELL. We believe it corresponds in all essential points with those delivered for many years past in Edinburgh by Sir GEORGE BALLINGALL. It will be obvious, on the merest glance at this syllabus, that the subjects are of intrinsic and essential importance to all who are to share the lot and administer to the necessities of our seamen and soldiers. We say "seamen" as well, for they are but soldiers fighting on the waters.

It is worthy of serious remark, as it is to the honour of our profession, that the three greatest works in our language on naval and military economies and discipline, are from the pens of naval and military surgeons.

TROTTER, in addition to his celebrated "Medicina Nautica," and other valuable works on the prevention and cure of the diseases of fleets, was the author of a plan for manning the British navy *without impressment*, and that of transporting troops to and from our various colonies in Government ships. By the as yet but partial adoption of this simple arrangement, much comfort and efficiency have been bestowed on our land forces, while much money has been saved by it. Its adoption during the late war would have saved millions sterling. TROTTER's name is never mentioned by the authorities in connexion with these vast improvements, and during life he was neglected and ill-used by them.

ROBERT JACKSON's celebrated work, "On the Formation, Discipline, and Economy of Armies," will be read with advantage by our statesmen and commanders so long as the discipline and fame of our soldiers are held in esteem by Englishmen. JACKSON, like TROTTER, was neglected and ill-used during a long life of the most useful and devoted service.

We do not know whether the distinguished and respected Inspector-General, HENRY MARSHALL, was better dealt with by authority; but his various works on the prevention of disease in armies, his statistical reports, and his famous work on military rewards and punishments, and on the recruiting of the army, will always remain standard authorities. Well may Scotland feel proud of these three sailor and soldier surgeons, her sons.

Mr. TUFNELL is a worthy labourer in the same field, and we hear from concurrent quarters, that his lectures have obtained a high reputation in Dublin. How much longer shall we be without a similar course in this metropolis?

"PART I.

The examination of recruits for the public services, and the points on which the efficiency of men for each service depends.

The dieting, clothing, and exercise of troops in the various stations.

Construction of permanent and temporary barracks, camps, and hospitals.

Discipline and management of the same.

Ventilation, drainage, and the phenomena of miasma and contagion.

Accommodation of troops on board ship, in camp, in barracks, and in billets.

Circumstances affecting their health in the different situations in which they may be placed.

General observations on the means of preserving the health of soldiers and seamen.

Means of transporting sick and wounded, illustrated by models, plans, and diagrams.

PART II.

General observations on inflammation, as connected with the injuries to which soldiers and seamen are more particularly liable.

Burns from explosions of gunpowder.

Gunshot wounds.

Sabre and bayonet wounds.

Ophthalmia, as it has affected and does affect British troops; its sequelæ and their treatment.

The venereal disease, and the use and abuse of mercury.

Diseases of the generative and urinary organs, unconnected with syphilitic origin.

Diseases of foreign stations, more particularly those of the tropics.

Cholera, dysentery, hepatitis, beriberi, Guinea worm, yellow fever, coup de soleil, &c., &c.

PART III.

Intemperance: its baneful effects in the British service.

Delirium tremens. The use and abuse of ardent spirits.

Smoking, and the use of tobacco: their immediate and remote effects on the nervous system and digestive organs.

Military discipline, and its effects upon the moral and physical powers.

The general consideration of military punishments, flogging, solitary confinement, hard labour, &c.

Fictitious diseases and malingering.

Causes which permanently disqualify men for the services.

The general duties of the military surgeon on board ship, in quarters, and in the field."

TRIAL OF A COFFINITE QUACK.

ONE of those extraordinary trials has just taken place which weaken all faith in the national jurisprudence. A Coffinite quack has been tried before Mr. Justice WIGHTMAN, at the Central Criminal Court, for the manslaughter of a poor boy. The deceased had a diarrhœa, and the Coffinite was applied to, who gave him some irritating powder, consisting of lobelia, hemlock bark, and

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other drugs, to take internally, and administered an enema having the same composition. The boy died the next day, and it was found, upon a post-mortem examination, that enteritis was the cause of death. It was proved in evidence, by Dr. LETHEBY, and others, that the irritant given by the accused was so powerful that it was impossible to keep it in the mouth, and when placed upon the hand it acted just like a sinapism. A small quantity of it was given to a dog, and it produced, in a short time, bloody evacuations. Yet, in spite of this evidence, the jury acquitted the prisoner. This Coffinite is a costermonger, who sells potatoes on one side of his shop, and COFFIN'S "composition powder" on the other.

We regret to say that the conduct of the judge who presided at this trial, was highly censurable, and to this we attribute the verdict. We should have thought it one of the highest attributes of justice to show a special care for the lives of the poor and ignorant, and to punish those who ignorantly, and from base and mercenary motives, tamper with their lives and health. Mr. Justice WIGHTMAN, unless he was wrongly reported in the *Times*, would show more pity for a dog, than for a Christian child sent prematurely into the other world through the agency of a quack. One of the medical witnesses deposed to the following facts in his cross examination:—

"By Mr. PARRY.—The powder had a very violent effect when administered to a dog, and nearly killed the animal. He had applied some of the powder externally on the skin, and it had very much the effect of a mustard poultice. The manner in which he administered it to the dog was in water, a teaspoonful of lobelia, and the same quantity of the composition powder.

Mr. Justice WIGHTMAN.—What, two teaspoonfuls to a dog?

Witness.—Yes, my lord.

Mr. Justice WIGHTMAN.—It appears by the evidence that only half a teaspoonful was given to the child."

Thus, his lordship was shocked that a dog should be thought more tolerant of poison than a human being. Nor was his lordship's fact right, for besides the poison given by the mouth, and repeated, an enema was given by the prisoner, as we have already stated. We quote the evidence to this effect by one of the witnesses:—

"She put *half a teaspoonful* of this powder into a wine-glass and was about to administer it to the deceased, but he would not take it, and she did not get him to take any until the Wednesday following. He had complained of pain in the stomach, and on the Tuesday witness gave him some rhubarb. After she had given the deceased the composition powder he became much worse, and she went to the prisoner and told him of it, and he then said they must administer an enema to him, and the prisoner *brought some powder and mixed it, and then he and her husband applied it to the boy. The prisoner advised that some more composition powder should be administered, and he said it would meet the enema*, and the boy would soon be better."

So much for his lordship's "half a teaspoonful."

In his lordship's summing up, the accused was treated, not as a potato-huckster, ignorantly dealing with life and death, but the case was put just as though he had been a regularly educated professional man. We are told:—

"The learned judge summed up, and in doing so explained to the jury that the principal question for their consideration in this case was whether the prisoner had been guilty of such gross rashness, or exhibited such gross ignorance in his treatment of the deceased, as occasioned his death, and in that case only would they be justified in finding him guilty of the offence of manslaughter. It would be very hard indeed upon a medical man, or any other person, if because the patient he was attending died, he was to be subjected to a charge of manslaughter, and if it were to be so, very few men would like to incur the responsibility of practising the science of physic."

After this specimen of Mr. Justice WIGHTMAN'S philosophy, no wonder the potato quack was acquitted.

VEGETARIAN FOLLIES.

No system is so absurd, nor any opinion so untenable, as to lack defenders and proselytes. Mesmerism, homœopathy, besides numerous modern fallacies, irrespective of those prevalent in barbarous times, might be quoted as illustrations of this propensity in the human mind to go astray; seeing many erroneous doctrines have advocates who think themselves right, whilst they gravely assert all believing otherwise are wrong. It is consequently amusing to contemplate the different theories which have occasionally occupied the limited intellects of credulous coteries, by whom the few facts brought forward as evidence, although apparently authentic, are usually so mystified, and interlarded with gratuitous assertions, that it becomes difficult to deduce correct conclusions from the premises supplied. In short, to speak figuratively, the partisans employing this mode of warfare, are like cuttle-fish discharging an inky-coloured liquor upon assailants; whereby escape is favoured through darkness thus produced in the immediate neighbourhood of such combatants.

These reflections, applicable to some of the new-fangled notions which zealots have attempted to foist upon public credulity, seem warranted by the original sentiments promulgated at a recent meeting of the society denominated "Vegetarian." On this occasion, the chairman, an M.P. of repute, when explaining the principles actuating this newly-fledged sect, said, amongst other recommendations, that "the vegetarian system was sanctioned by the laws of nature! that anatomy showed man was made to eat fruits and herbs!! whilst scripture, and the practice of the wisest and best of men were in its favour"!!! But the greatest flight of fancy was achieved when the author seriously asserted that "*two pennyworth of peas contained more nutriment than a shilling's worth of beef*"!!! Subsequently the President of this novel fraternity, in order perhaps to excel the acting chairman, amongst other arguments, boldly affirmed that "chicken-broth was more *indigestible* than pea-soup! that new-bread stood on a level with mutton-chops"!! and let JOHN BULL

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believe it if he can, "*roast-beef was very innutritious*" *!!!* To hear such extraordinary "dicta" publicly advanced by an elected legislator of the British Parliament, and re-echoed by the chosen head of an assembly of intelligent Englishmen, is really astounding, and must be taken as another significant sign characterizing the remarkable year 1851; which will be known to posterity, not only by the total eclipse and the Great Exhibition, but by the actual meeting together of 718 really live vegetarians in the modern Babylon of England; which large number (!) of persons had virtually enrolled themselves under that denomination from amongst the twenty-one millions of inhabitants resident in Great Britain.

We are no enemies to vegetable diet under certain limitations; nay, we opine, if combined in proper proportions with fruits, fish, and the flesh of animals, not only the corporeal frame, but the intellectual faculties of man will be essentially benefitted by it. However, to maintain that scripture, nature, anatomy, and experience are in favour of all mankind living entirely on vegetables, is pure moonshine. The converts who have given their faith to this, may, if they choose, believe similar assumptions, but no human being who thinks seriously of the matter, can ever become a proselyte to such doctrines. Occasionally, individuals may be met with that would benefit by an incidental vegetable dinner. For instance, Alderman Gobble, who very frequently fares on turtle and venison, well moistened with iced punch and champagne, would enjoy much better health were he to become a vegetarian for the nonce. Another class, whose habits are usually sedentary, might be also included within this category—viz. legal gentlemen, of whom a writer in the last number of the *Law Review*, when speaking of the gastronomic propensities of his own profession, acknowledges, at page 364, "that few men eat more than lawyers, and among lawyers, judges usually eat more than barristers, and chancellors certainly more than judges." These, and various other gormandizing adepts living in this luxurious over-grown metropolis, might judiciously become vicarous pupils during a day or two, to the graminivorous system; but for the great mass of the British population, an opposite course is highly desirable. In the agricultural districts of England, the labourers have by far too little animal food at meals; and many seldom see beef or mutton. Again, in Scotland, every lover of his native country would wish the lower ranks were able to add meat to the unvaried oatmeal porridge and brose, which often constitute their only sustenance. And lastly, in potato-eating Ireland, already much more vegetarianism prevails than is salutary; not from choice, but absolute necessity. In truth, instead of recommending the labouring portion of the imperial community to eschew animal food, the constant object of legislators, societies, and philanthropists, ought to be rather to improve the quality, lower the price, and augment the quantity of the above necessary article of diet; by which judicious measures, whatever protectionists may say to the contrary, every class of persons might always have abundance for their daily consumption.

Amongst the innumerable conclusive reasons which could be adduced against the adoption of vegetarian heresies, one appears insuperable—namely, were mankind solely to use vegetable food, many persons must starve from sheer want, since field or garden produce could not then suffice for the human race, independent of birds or land and water creatures, that would, under these circumstances, become numerous as well as powerful competitors in the general scramble for seed, and roots, or perhaps for blades of grass and the like productions. The proposition is therefore so utterly inconsistent with common sense, that further discussion is superfluous, seeing the entire framework of society must be shaken to its centre wherever such practices prevail to any extent, whilst chaos would inevitably ensue. The idea is visionary, and never could be realised; hence it merits, if not contempt, at least oblivion. Nevertheless, should any afflicted leguminous scions again hold meetings, to disseminate anew their peculiar tenets, or if neophytes may wish to enter the "sanctum,"—in order to prevent parties engaged in these ceremonies from laughing outright in each other's faces, especially when the advantages of living exclusively on fruits and vegetables are advocated in eloquent harangues, we would seriously advise every adherent to carry in his pocket a juicy onion, cut through the middle, but wrapped in a handkerchief, so that, by putting this necessary appendage of dress slyly to the *nose*, all risible tendencies might be instantly arrested, and tears made to flow abundantly; whereby the uninitiated must suppose that members were lamenting over the inveterate prejudices of those unbelievers who still consume fish, flesh, fowl, or good red-herring. To such sensible folk, we now say, in conclusion, *remain stanch Carnivori*.

It has been frequently a matter of regret with us that no public acknowledgment has ever been made by the profession, and especially by the military and naval medical departments, to the gallant officers, Sir De Lacy Evans and Sir Howard Douglas, for their exertions in obtaining the military honours of the Bath for army and navy surgeons. For ourselves, we are too much accustomed to professional forgetfulness to feel any personal disappointment, but we do sincerely deplore the silence with which this great and lasting boon has been received. A brother editor, in India, has expressed everything that can be said in this matter; and we do trust, with him, that it is not yet too late to render our advocates in Parliament some substantive mark of gratitude. The idea of presentation swords is an admirable one. It will indeed be strange if the only public expression of gratitude for the decoration of the Bath should be a testimonial to one of the decorated! We hold Sir James Thompson in the highest esteem, but none must feel more uncomfortable than himself at

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the knowledge that the benefactors of the army and navy surgeons beyond all precedent since armies and navies have had the aid of our profession, should be treated with a silence which is too likely to be construed into ingratitude. Nor should the services of Captain Boldero, made on behalf of the persecuted naval assistant-surgeons, be forgotten in this hour of triumph.

THE PROVINCIAL ASSOCIATION AND QUACKERY.

The meeting of the Provincial Association at Brighton will long be held in remembrance, and by none more certainly than the quacks whose proceedings were the subject of discussion on that memorable occasion. At former meetings of the Association its members have done well, but the Brighton gathering is the most expressive which has yet occurred since the foundation of the Society. The Provincial Association has generally met to hear brilliant addresses in medicine and surgery; for purposes of good-fellowship; the transaction of matters of business connected with the Association; the expression of collective opinion on the subject of medical reform; and the reading and discussion of papers from the more aspiring practitioners in the country. All these points were duly and vigorously attended to at the past anniversary; but they sank into insignificance as compared with the great and simultaneous movement against the odious quackeries of the homœopaths of which it was the occasion. It appeared as though all the strength and energy of the greatest permanent voluntary association of medical men which has ever yet been formed, spontaneously resolved itself into one determination and one will, to repudiate the grossest and most mischievous quackery of modern times. It must have been a gratifying sight to Sir Charles Hastings, to see men gathered together from the extremities of the kingdom, all of one accord in thrusting out from among the profession the unworthy persons who have succumbed, either in their minds or their consciences, to the inanities or the gains of globulism. It was not until this year that the Association felt its full strength for the assertion of sound professional ethics. We do not hesitate to say, that the adoption of the anti-quackery resolutions so skilfully framed by Dr. Cormack and his colleagues with unanimity and acclamation, is the highest function which the great Association, of which it is the pride of Sir Charles Hastings to have been the founder, has ever performed. Nothing can be better than the impetus which Dr. Cormack has had the merit of giving to the Association. Long will it place the profession under a deep debt of gratitude. We only regret that London had not more to do with such a gratifying spectacle; but the presence of Dr. Charles J. B. Williams, who was the first physician in this metropolis publicly to refuse all consultation or professional intercourse, on any pretence whatever, with homœopaths, and the attendance of the Presidents of the Colleges of Physicians and Surgeons, must exert a salutary influence on the profession here, and especially upon the Colleges themselves.

We are glad to perceive that the Association has printed the whole of the proceedings at Brighton having reference to homœopathy, for circulation among its members. Thus those who had not the good fortune to be present will participate in the great event, and an extended good must be the result. We trust the pamphlet will also be circulated beyond the limits of the Association, at a cheap rate, for nothing could tend more to the extension of a healthful tone amongst the profession, and we may say, amongst the public, than the promulgation of the facts contained in this pamphlet. We should have quoted from the speeches, but where all was so good, selection was difficult. We cannot, however, avoid giving a permanent place to the resolutions in our pages, and we trust, and doubt not, the spirit they evince will be continuously seconded by the anti-quackery Committee, by the press of the Association, and by the various district Societies. There will then be good cause for gratulation at the next general meeting, at Manchester, in August, 1852.

RESOLUTIONS.

"1. That it is the opinion of this Association, that homœopathy, as propounded by Hahnemann and practised by his followers, is so utterly opposed to science and common sense, as well as so completely at variance with the experience of the medical profession, that it ought to be in no way or degree practised or countenanced by any regularly educated medical practitioner.

"2. That homœopathic practitioners, through the press, the platform, and the pulpit, have endeavoured to heap contempt upon the practice of medicine and surgery, as followed by members of this Association and by the profession at large.

"3. That for these reasons it is derogatory to the honour of members of this Association to hold any kind of professional intercourse with homœopathic practitioners.

"4. That there are three classes of practitioners who ought not to be members of this Association—viz., 1st, real homœopathic practitioners; 2nd, those who practise homœopathy in combination with other systems of treatment; and 3rd, those who, under various pretences, meet in consultation, or hold professional intercourse with, those who practise homœopathy.

"5. That a committee of seven be appointed, to frame laws in accordance with these Resolutions, to be submitted to the next annual meeting of the Association.

"6. That the thanks of the Association are eminently due, and are hereby given, to the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh, for their determined stand against homœopathic delusions and impostures.

"7. That the thanks of the Association are also due, and are hereby given, to the Universities of Edinburgh and St. Andrew's, for their resolution to refuse their diplomas to practitioners of homœopathy; but the Association feels imperatively called on to express its disapproval of any School of Medicine which retains among its teachers any one who holds homœopathic opinions.

"8. That these Resolutions be printed, and transmitted to all the Medical Licensing Bodies and Medical Schools in the United Kingdom; and that they

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likewise be inserted in the *Times* newspaper, the *Morning Post*, the *North British Advertiser*, *Saunders's News Letter*, all the British and Irish Medical periodicals, and in such other journals as the Council may sanction, upon the recommendation of the Branch Associations."

Reviews and Notices of Books.

Clinical Observations on Diseases of the Genito-Urinary Organs. Part I. Gonorrhœa and its Consequences. By HENRY JAMES JOHNSON, formerly Lecturer on Anatomy and Physiology, and Senior Assistant-Surgeon to St. George's Hospital. 8vo, pp. 358. London: Highley and Son.

MR. JOHNSON concludes his short preface with the words, "Many write *for* practice, some write *from* it. Opportunity and circumstance place me in the latter category." Every reader of the work will, we are assured, be ready to subscribe to the truth of the author's remark. Nothing less than a very extended experience, combined with unusual powers of observation, and a habit of sound induction too frequently despised or neglected by those who are distracted by the labours and rewards of a large practice, could have enabled a writer to make so valuable a contribution to a branch of medical science, which, more than many others, labours under the opprobrium of having no uncontested principles.

The author has very wisely neglected the historical treatment of the subject. He probably thought, and if so, rightly, that this might be a theme adapted to a medical *littérateur*, but unworthy of one who has been for years engaged in battling with stern facts, the nature of which it is of the utmost importance to investigate. Mr. Johnson would have falsified the expectations of those who have a right to hope for help from his skill and experience, had he wasted his time and that of the reader, by elaborate proofs that the ancients knew nothing at all about gonorrhœa or syphilis, or that if they did, their knowledge is hid from us. The truth is, that there is nothing left to be said on the historical portion of the subject. The negative evidence is overwhelming, that the ancient world knew nothing of the diseases in question. Had they existed in ancient Rome, it is almost impossible that no mention should have been made of them in Juvenal's sixth satire. A similar remark applies to Athens and Aristophanes. On the contrary, the universal testimony of historians and satirists, of political and literary characters, to the sudden appearance, shortly after the siege of Naples in 1494, of a class of disorders, which, if not identical with, were incontestably the ancestors of, the venereal diseases of the present day, proves to our mind satisfactorily that the period alluded to marks their origin in Europe. It is utterly impossible, upon any other hypothesis, to account for the terror and consternation which seized all minds at this time, and exerted their greatest power over those who ought, had any malady of the kind previously existed, to have been prepared with palliatives or cures. So far, however, was this from being the case, that they were paralysed. In the midst of the general wailing, the medical men held their peace. Ulrich von Hutten's testimony to this point is decisive:—"Atque hoc præcipue in morbo, quontum nostra ætate laboret medicina, compertum est. *Silebant* ab ejus ortu, *totum* in Germania *biennium*, *medici*."

Mr. Johnson has wisely confined himself to the examination of the diseases as they now exist. In conducting this examination he has furnished us with numerous examples of the manner in which medical induction is to be used, that cannot but be of the greatest value to the profession generally, and to students in particular. He accumulates facts sufficient to satisfy the requisitions of the most rigid experimentalist, but he never loses sight of the great truth that these facts are not worth the paper on which they are described, until they are fused together by the process of the mind, and presented as phenomenal states of the development of a law. He is neither a dry experimentalist, nor a wild theorist. He has comprehended the true spirit of the Baconian philosophy, and has not fallen into the absurd error of those who imagine that the great philosopher considered experiment as the be-all and end-all of philosophy. "Qui tractaverunt scientias," says Bacon, "aut empirici aut dogmatici fuerunt. Empirici, formicæ modo, congerunt tantum et utuntur: rationales vero, aranearum more, telas ex se conficiunt. Apis vero ratio media est, quæ materiam ex floribus horti, et agri elicit, sed, tamen eam, propria facultate, vertit ac digerit." We cannot but think that the apothegm has lost but little of its force in the present day, and that a very small fraction would represent the proportion of the bees to the ants and spiders. The following remarks of the author are in the best spirit of this philosophy:

"However your 'practical man' *pur sang* [the ant] may affect to despise these generalizations, which he damns in the lump as theory, he is himself the worst because the narrowest of theorists [spiders]. He denounces indeed great principles, but is a bigot in little ones, and unable or unwilling to grasp facts in the mass, he clutches them hard in detail.

"What has led to centuries of pernicious practice in these diseases, if not the application of false theories [spider's webs]?—if not the imperfect generalization of facts [ant-heaps]. Why was gonorrhœa considered as identical, or at all events closely allied with syphilis? Because both sprung from impure connexion, both were *therefore* the result of a morbid poison, and morbid poisons *must* be much alike. Why was mercury *the* remedy for syphilis? Because every poison had its antidote—a superstition older than the days of Mithridates—and facts proving the influence of mercury, *therefore* it was a specific. Why was mercury so frightfully abused in primary and secondary syphilitic symptoms? Because, being the specific, the worse the disease the more, *therefore*, that specific was required. Why have copaiba and cubebs been given in all stages of gonorrhœa? Because they were the reputed specifics for it, and *therefore*, from the analogy of syphilis and mercury, the more intense the gonorrhœa the more it needed them. Why, in gonorrhœal rheumatism—a pure inflammation of synovial membranes—has it happened that cubebs and capivi have been administered? Because

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of that same analogy. I might proceed much farther in this strain, but it is needless. The gross errors I have quoted have been those of 'practical men,' who while they scouted all theories were still acting upon wretched ones."—(p. 108.)

Mr. Johnson arranges the modes of treatment into real divisions: the expectant, the antiphlogistic, the empirical, and the rational methods. The first, which turns the patient over to the "vis medicatrix naturæ," and professes to hold out no other hope of extinguishing a conflagration than the possibility that it "*may* go out of itself," is, he says, condemned by experience and reason. Of the second method, he remarks:

"I will not say that general bleeding and antiphlogistic treatment of an active character can *never* be requisite in this complaint. In persons of a plethoric habit, the inflammatory symptoms may be so acute as to demand it; but I have never seen a case in which venesection was necessary for gonorrhœa, independently of the complications that may wait upon it, and I apprehend that, in general, measures of a very lowering character are neither needed nor judicious."

The third method consists in the empirical employment of "specific" or "revulsive" remedies.

"Confidence in specifics," observes the author, "marks a low state of medical science, and is usually in an inverse ratio to its cultivation. Before the nature of the morbid actions which constitute disease was understood, each group of symptoms was erected into an individual malady, and a search was commenced for its appropriate antidote. The pharmacy of uncivilized nations is made up of substances which, however simple, have marvellous properties attached to them. As medicine made progress, symptoms were found to be merely the exponents of certain actions, common to apparently different disorders, and the discrimination of such actions and their regulation came to supersede the blind application of nostrums. But along with the development of physiological and pathological views, pharmaceutical discovery produced, from time to time, some drug possessed of such remedial powers as to approach very nearly to 'specific.' The Peruvian bark, mercury, sulphur, iodine, are instances of this description. The introduction of such remedies has generally been characterized by extravagant anticipations of their value; and their employment has been as indiscriminate as their virtues were exaggerated. It is only when observation and experiment, assisted by analogy and reasoning, have taught us to direct the administration of these remedies by our physiological and pathological knowledge, that it has become successful, or even safe. I fancy that if the benefits and the evils of mercury were impartially summed up, the former would be found to leave us little cause for exultation.

"I should feel disposed to apply these observations to the case before us. Copaiba and cubebs, and medicines of that character, exerting as they do an indisputable influence over urethral discharge, have been, not unnaturally, invested with more than they actually enjoyed. The symptom which they control has been considered *the sum of the disease*; and the different conditions of the urethra that attend it have been either disregarded, or esteemed of subordinate importance. The presence or absence of inflammatory action, and its probable influence upon the treatment, have been thought unworthy of attention; and whilst most surgeons have used these stimulating drugs without any reference to it, some have gone so far as to protest that the existence of inflammation renders their beneficial operation more decisive.

"The result of the prevalence of such views has been a looseness in the observation of the phenomena of gonorrhœa, carelessness in the examination of the urethra, neglect of the morbid states of its constituent parts, and the most unscientific and unsatisfactory treatment of them."—(p. 49.)

The soundness of these observations needs no confirmation. It may not, however, be irrelevant to remark that the tendency of the mind which urges medical men to the employment of specifics, is universal: and its effects are visible in other fields of observation, besides those opened by medical practice. This tendency is manifested generally in the form of *a preference for mechanical over vital action*. It leads, in religion, to the crystallization of vital doctrines into dead creeds,—to the chaining devotion down to the rigid forms of an unyielding ritual,—to the cramping morality within the limits of a definite code. It crushes the efforts and the aspirations of the individual will, and sends all men spinning along the same tram-road at a regulated pace towards heaven. We see the same tendency manifested in education. The intellects, the feelings, the passions of children are all diverse; they would flutter about the garden of knowledge like so many butterflies; but the advocates of "specifics" step in, each with his nostrum, all differing from each other in most respects, but agreeing in this, that the wings must be clipped, and the subjects of education be reduced to grubs, that they may be unable to move in any other than fixed dirty channels, dug for them on the surface of the earth. While we have a thousand "specifics" for the attainment of heaven, as many for the due cultivation of the mental powers, is it wonderful that the medical man should prefer his claim to the discovery of a royal road?

The three above-mentioned methods of treatment being dismissed, the author avows his disposition to lean towards the "rational method," to those "principles of treatment which constitute the basis and the pride of modern medicine." He does not see why general views, founded on observation, obtained at a large cost of time and experience, consistent with reason, and wearing the attributes of that philosophy which has done so much for the natural sciences, should not be as applicable here as in other parts of the body. If science tested by universal success, tells us to put down inflammation of the mucous membrane of the throat, the larynx, the lungs, or the intestines, before venturing on stimulants, there can be no reason, *à priori*, why it should not be as scientific and successful to endeavour to put down inflammation of the urethra before we stimulate it. If it be answered to this reasoning, that facts establish the contrary, he replies that he joins issue *on* the facts. He asserts that an extensive experience in the Lock Hospital convinced him of the impropriety of the general practice, although before this time he had, in compliance with the usual custom, been in the constant habit of employing stimulants!

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"At the hospital I had an opportunity of testing that practice on an extensive scale, and of closely watching its effects. I soon grew disgusted with it, and perceived—what all my subsequent experience, public and private, has confirmed—the necessity for some principle on which our treatment should be based.

"That principle I believe to be, to look upon inflammation as a substantive thing, *plus* the gonorrhœal discharge; to be met by means adapted for itself, and forbidding whilst it lasts, the use of stimulants."—

Whatever may be the judgment of the scientific world, at some future period, upon the soundness, and therefore the value, of this principle, there can be no doubt that it has only been adopted by the author after investigations conducted in the thorough spirit of that philosophy which has rendered the greatest services to the inquirers into the causes of natural phenomena. He gives the most convincing reasons that the principle is one thoroughly supported by facts, and it is only by facts that he can be opposed. Facts, however, have no value in argument, except when employed by those who know how to use them; and Mr. Johnson will have the right to assert his principle in the teeth of all those who oppose him, until he meets with an antagonist who is not only as good a surgeon but as good a dialectician, as himself. No person who reads the work can deny that the author has made out a case for the employment of what he terms the "rational system," which it will be most difficult to controvert.

We have confined our attention to the philosophical rather than to the surgical features of the work, although it be difficult to find a modern medical treatise in which so much real knowledge of surgery is combined with so much sound philosophy. It is the province of the great experimentalist to *indicate* his philosophy by means of his facts; and we have no hesitation in giving our opinion, that Mr. Johnson's facts are the best support of his philosophy. We plead guilty, however, to a *penchant* for works which endeavour to bring large masses of facts, apparently isolated, under the dominion of unchangeable laws. All experiment tends towards this end, and unless this is achieved, facts are nothing. This must be taken as an excuse for directing the attention of our readers more particularly to that feature of Mr. Johnson's work which appeals to principles rather than to isolated facts. Were we examining the production of one whose experience might be questioned, we should probably take a different course; but Mr. Johnson's professional reputation is quite able to take care of itself, and we are only too willing to take advantage of the skill which has been the foundation of it, to enable us to get a little insight into those principles which are the foundation of all practice. It is for this reason that we have dwelt more upon the philosophical than the practical portion of the treatise before us, and that in bidding adieu to this part of the subject, we recommend to the earnest attention of practical men, and to the diligent study of learners, such disquisitions—and there are many of the class—as that upon "Metastasis," p. 198.

It is unnecessary to say much upon the structure of the work. The author, being the experience derived from a large practice to throw light upon the views adopted by the majority of the profession, has taken care to construct the framework of his treatise in such a manner that the architecture should place no difficulties in the way of ordinary students. We have, first, the Forms of Gonorrhœa; secondly, the Seat of Gonorrhœa; thirdly, the Causes of Gonorrhœa, in which section we would particularly direct the notice of the student to the remarks on the "Syphilitic Sore in the Urethra," (p. 19:) In this section (p. 28), the remarks upon the "menstrual secretion" as a cause of gonorrhœa, are particularly valuable; and also those upon the noxious qualities of the secretions of some females, (p. 31.) The treatment of Gonorrhœa occupies the next division of the work, and to this portion our remarks have been particularly directed above. The Consequences of Gonorrhœa, together with a short disquisition on Gonorrhœa in the Female, form the conclusion of the treatise.

In concluding the notice of a work which we cannot but think is destined to become a classic, we cannot refrain from congratulating the author upon the adoption of a style which, at the same time that it is thoroughly English, lucid, and scientific, is vigorous and satisfactory. It would be difficult to find a book in which "cases" are described so tersely and yet so completely. With the quotation of one, we conclude our notice.

"A young man in the Lock Hospital had a cachectic bubo, ulcerated, and in a chronic state. The surgeon pared the edges of the ulcer with a scalpel. Phagedæna immediately ensued—it extended widely, deeply, and fast—the femoral artery was laid bare and seen pulsating fearfully at the bottom of the spreading sore. I was house-surgeon at the time, and apprehensive of what would occur, I sent a nurse and an assistant to watch this patient exclusively. I had paid my morning visit, and was quitting the ward, when a shout recalled me. The artery had given way. I shall never forget the scene. The nurse had her hands in the wound, from which the blood was issuing in gushes, every one of which seemed death. With a *presse artere* which was ready, I instantly arrested the circulation through the vessel, on the pubic bone, and then stuffed the wound with lint. Pressure in both places was kept up by relays of assistants for three or four nights. The patient at the same time was plied with brandy, wine, and opium. He was saved. A clot formed, the phagedæna was arrested, and the wound cicatrized. I have met him more than once since, and he has continued strong and hearty. The flow of blood appears to be uninterrupted through the femoral trunk. In all my professional life I have never seen another such escape from imminent destruction. Whoever witnessed it would pause before he meddled with a cachectic bubo."—(p. 260.

Would that all cases of the like importance were described as graphically, and with as little circumlocution as this.

The Histories of the Colleges of Physicians and Surgeons, and of the Apothecaries Company, &c. By Edwards Crisp, M.D. Pamphlet, pp. 32.

An interesting little pamphlet, well worthy of

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perusal. It embodies some curious manuscript annals of the London College of Physicians, from 1682 to 1749.

A Practical Treatise on the Management of Diseases of the Heart, and of Aortic Aneurism, with Especial Reference to the Treatment of those Diseases in India. By NORMAN CHEVERS, M.D., Civil Assistant Surgeon, Chittagong, Bengal. R. C. Lepage and Co., Calcutta. 8vo., pp. 145.

DR. CHEVERS is well known by his writings on Diseases of the Heart, contained in Guy's Hospital Reports, and other publications. Since he has been stationed in India, his attention has been particularly directed to the same class of diseases as prevalent in that country; and his experience has led him to determine that diseases of the heart are much more common in our Eastern possessions than might have been expected. He lays down some very valuable rules with regard to the management of these cases, which, in the main, do not appear to differ materially from the plan we pursue in this country. Dr. Chevers is an accurate observer, and his little work will prove of much service to those gentlemen who practise medicine in India. We quote the following passage from the preface, as it conveys a mild, but at the same time a just rebuke to that unworthy class of writers who pander to popular prejudices, and who seek to obtain practice at the expense of the respectability of their profession:—

"I am not anxious to recommend the perusal of this treatise to extra-professional readers; it is addressed exclusively to the profession; and I am confident that whatever benefit any reader, not well versed in pathology, might derive from the application of the hygienic rules which it contains, to his own case or to the cases of his friends, would be more than counterbalanced by the disadvantage of his contracting a certain proportion of those erroneous views, exaggerated apprehensions, and impulses to injudicious acts, which thickly haunt every item of that grievous evil—a little knowledge of medicine."

The Reciprocal Agencies of Mind and Matter; and on Insanity. Being the Lumleian Lectures, delivered at the Royal College of Physicians, A.D. 1851. By J. C. BADELEY, M.D., Cantab. 8vo, pp. 60. London: Churchill.

DR. BADELEY has treated a somewhat hackneyed subject with much originality and ability. It is one of the most interesting works which has fallen under our notice for a long period. It would be difficult to extract any portion which would convey a just idea of the work, which is as interesting to the lay as to the medical reader.

Was the Roman Army provided with any Medical Officers? By J. Y. SIMPSON, M.D., F.R.S.E. Pamphlet, pp. 18. Edinburgh: Sutherland and Knox.

DR. SIMPSON has been unable to discover any reference to the circumstance of surgeons or physicians being regularly appointed as army medical officers in the Roman army, for the purpose of superintending the treatment of the wounded, or to take professional care of the soldiers disabled by sickness and disease. Dr. Simpson proceeds, however, to show, from some modern discoveries in Great Britain and elsewhere, that Roman armies were provided, at all events in the time of the empire, with a medical staff. He then describes a tablet found among some Roman remains at Housesteads, in Northumberland, which tablet has upon it an inscription which is thus translated by Mr. Bruce:—

"Sacred to the gods of the shades below. To ANICIUS INGENUUS, Physician in Ordinary of Cohort the first of the Tungrians. He lived twenty-five years."

Dr. Simpson continues:—

"The first Tungrian Cohort, which erected this monument over the grave of their young physician, distinguished itself under Agricola, at the battle of the Mons Grampius. It was afterwards, as we learn from some legionary inscriptions, engaged at Castlecary in erecting there a portion of the more northern Roman wall of Antoninus, which ran from the Forth to the Clyde. Subsequently it was stationed at Cramond, near Edinburgh, and there raised an altar to the *Matres Alatervae* and *Campestres*. Still later this Cohort was stationed in Cumberland; and latterly at Housesteads, in Northumberland, where the monument we allude to, and several others, were erected by them.

"The youth of this military physician is remarkable. He died at twenty-five.

"The title, 'MED. ORD.,' '*Medicus Ordinarius*,' may perhaps suggest the idea, that there were more than one medical officer attached to the Cohort; otherwise the distinctive term '*Ordinarius*,' would probably not have been used. It looks as if it were in contradistinction to '*Extraordinarius*,' or some similar designation.

"The elaborate nature of the carving of this monumental tablet affords the strongest evidence of the esteem and respect in which this young physician was held by his Cohort. In fact, it is more ornamented than many of the altars raised in this country by this and other Cohorts to the worship of their gods."

The Anatomy and Diseases of the Prostate Gland. By JOHN ADAMS, Surgeon to the London Hospital. 8vo, pp. 160. Longman.

THE author of this work is well known to the medical world, and holds a distinguished position amongst his professional brethren. He has already given good proof of his knowledge of the subject he treats of, in an article upon it in Todd's "Cyclopædia," and from which much has been transferred to the work before us.

In the first chapter are given the anatomy and physiology of the organ, and the account is clear and comprehensible. The second chapter considers acute and chronic prostatitis, and prostatitis from onanism; and we are glad to find that Mr. Adams is no friend to that meddlesome surgery which inculcates, in these complaints, the not unfrequent employment of the catheter. The plans of treatment laid down are exceedingly judicious, and the impudent charlatanry of advertising impostors receives its just meed of castigation. The too indiscriminate use of the solid nitrate of silver to the prostatic urethra,—and which, in the present day, has become so *fashionable*—is spoken of in due terms of reprehension; and we

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are happy to see that the author has pointed out the kind of cases in which alone this peculiar mode of treatment is justifiable. The next chapter is a lengthy one, on hypertrophy of the gland, and the importance of the subject fully warrants the care which has been bestowed on it. We perfectly agree with the objections urged against the tincture of sesqui-chloride of iron in this affection, and believe that the irritability of the bladder is not unfrequently maintained by perseverance in the use of this medicine. The suggestion of having a catheter armed with a piston, which shall pass down to the end of the instrument when introduced for the purpose of withdrawing blood from the bladder, is novel and ingenious.

In speaking of the nature of senile hypertrophy of the gland, Mr. Adams states it to be an universal increase in the natural elements of the part, and this increase is particularly remarkable in the deposit of the white fibrous and muscular structures which fill up the spaces between the follicles. This opinion is also entertained by Dr. C. H. Jones. That such conditions exist there is no doubt, and it is equally true that in old age a fatty degeneration, which has proceeded to a greater or less extent, is very often present also. This latter fact has been ascertained by Mr. Canton; it was subsequently noticed by Mr. Hancock, and is referred to in a late pamphlet on the urinary organs by Mr. Guthrie.

This work we may confidently recommend as well worthy of perusal.

Miscellaneous Correspondence.

TREATMENT OF ANEURISM BY COMPRESSION.

To the Editor of THE LANCET.

SIR,—May I request the favour of your inserting, for the information of such of your readers as have not ready access to the *New York Journal of Medicine*, the following abstract of two cases of Popliteal Aneurism treated (by Dr. Wood, of Bellevue Hospital) by compression, and published in that journal.

My reason for making this request is, that they furnish additional and powerful evidence of the superiority of this mode of treating external aneurism, over that by the ligature and knife, and must tend to strengthen the confidence of surgeons generally in this mode of cure, by showing that an equal degree of success attends it (when carefully and steadily maintained) in other places, as in the Hospitals of Dublin. I was much gratified, during a recent visit to London, by the disposition evinced by those surgeons whom I had the pleasure of meeting, to give compression a fair trial in the different metropolitan institutions; but I could not, at the same time, help observing, that some, whilst admitting the success which had followed the employment of compression in Dublin, seemed to exhibit a want of confidence in it as practised elsewhere; and to express doubts as to the probability of its obtaining a favorable issue in their hands. In fact, their tenour seemed to be, as though, from the evidence in its favour, they considered it their duty to give their patients the chance of recovering by compression, still, that their own impression was, that in the majority of cases they would have to use the ligature at last.

I need hardly say that any line of treatment commenced under this prestige, is not likely to be as steadily and as perseveringly carried out, as one in which the surgeon feels confident of ultimate success; and as the cases in question will, I think, assist in producing this end, perhaps you will give them space in your columns.

The first case was that of an Irishman, aged thirty, affected with popliteal aneurism, the size of an orange, resulting from direct injury by a blow. Compression was constantly maintained, being alternated between an instrument placed on the thigh and pressure by the thumb upon the artery at the groin. Treatment was commenced January 23rd, and the disease cured the following morning; all pulsation having ceased by half-past three, or in eighteen hours from the time it was first begun. Subsequent recovery was unchecked; and the report, upon February the 20th, says, "the tumour is nearly absorbed, a vestige of it barely remaining."

The next is a man, aged thirty-three, who has suffered from syphilitic disease, and who has popliteal aneurism of the dimensions of a goose's egg. Similar treatment is adopted in every respect. Compression is begun at half-past nine in the morning, and continued throughout the day. By the same hour at night the aneurism is cured, the contents of the sac in ten hours being rendered solid and hard.

These facts, Sir, (so plainly and faithfully detailed by Dr. Wood,) must have their due effect upon unprejudiced minds. In conclusion, I would merely add, that the profession generally *have but to select fitting cases, and steadily use appropriate means*, and they will assuredly find compression to be attended by as happy results, and their practice crowned by a success equal to that which has rewarded the perseverance of the Dublin surgeons.

I am, Sir, your obedient servant,
JOLLIFFE TUFNELL.

WHAT IS THE PROPER DIET FOR NURSES.

To the Editor of THE LANCET.

SIR,—I believe it has long been the opinion of medical men and others, that a *moderate* allowance of wine or malt liquors, combined with suitable food, is a proper regimen for nurses in those cases where the secretion of milk is rather deficient. A contrary opinion, however, has been confidently maintained by teetotallers, and perhaps others—namely, although the quantity of milk may be increased by such means, that it is invariably deteriorated in quality, and calculated to impair the health of the infant, and perhaps permanently to injure the constitution. Some even go so far as to assert that children suckled by nurses who have been allowed wine or malt liquors, however judiciously administered, are liable to have a craving for stimulating liquids ever after. If these opinions are in any degree founded on facts, the sooner they are known and acted upon the better, and this can only be determined satisfactorily by extensive experience and observation, aided perhaps by organic chemistry.

I certainly have known remarkably strong, healthy children nursed by women who were the reverse of teetotallers.

I am, Sir, your obedient servant,
Alloa, July, 1851. J. S.

CHLORIDE OF ZINC IN TYPHUS.

To the Editor of THE LANCET.

SIR,—Taking into consideration the powerful antiseptic properties of chloride of zinc, its marvellous power in gonorrhœa, and one or two other diseases to

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which I have applied it externally with success, I am strongly persuaded that inwardly taken and proportioned accordingly, it may prove to be the antidote to the poison of typhus fever.

I am not of standing sufficient to feel authorized in trying the experiment, though it appears to me analogically rational; but men of established reputation may consider my hesitation uncalled for, and give the medicine a trial.

Your obedient servant,
M. R. C. S.

THE HUMBUG HOMŒOPATHY.

To the Editor of THE LANCET.

SIR,—On Friday last I was sent for in a great hurry to see a little boy, two years and a half old, who had obtained possession of a case containing six bottles full of homœopathic globules. He had swallowed *all* the contents of five of them, and nearly finished the sixth, when he was detected in the act. The little fellow seemed merry enough at having so adroitly eaten his "mamma's sweets," and apparently had suffered nothing by the move. He had sucked off most of the labels, but letters on the corks, marked as follows, made me tremble as I read them:—First was *sul.*, (sulphur, I suppose,) empty; next came 12
puls., (pulsatilly,) then *arn.*, (arnica, I presume, both 12 12
empty;) *bell.*, (belladonna,) all gone too! and lastly, 12
acon., (aconitine,) devoured all those likewise! I did 12
not stop to examine the sixth. What could 12 mean under each abbreviated label? Twelve grains, or one-twelfth of a grain, or the twelfth dilution, in each bottle? and the child not affected!! No, Sir; and I believe had he eaten a bandboxful, he would have done so with as much impunity as he would have eaten "hundreds and thousands." The sixth bottle remained half full, label and cork destroyed; for he had evidently had bottles and all in his mouth in a true philosophic spirit, so that no sceptic should doubt the fact; and I think, from counting those contained in this bottle, that each one contained about 500 globules; *more* if anything—certain I am, *not less*. If each globule be a dose, then my little hero swallowed at one "go" nearly three thousand doses of physic!—nearly one-sixth being aconite (or aconitine,) and another sixth belladonna, 500 doses of each.

I enclose the box for your inspection, and am, Sir,
Yours very obediently, C. B. GARRETT.

ON THE INCISION OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In the report of a lecture by Mr. Guthrie, on Stricture of the Urethra, in THE LANCET, there are some remarks of an apologetical character respecting an accusation preferred by M. Civiale in his late work on "Urethrotomy," which I shall show were unnecessary. As the charge, that his "voisins d'outre mer" claimed inventions for themselves which really belonged to the French, is principally brought against myself, I trust I may be allowed this opportunity of answering it.

It is necessary, in order to understand this question, to know that, in an appendix to the last edition of my work on "Stricture of the Urethra," I made an examination into the claims of M Civiale and others for the invention of lithotrity, or rather, for the invention of a mode of extracting stone without cutting the bladder; and if I am not much mistaken, I think I proved very clearly, that the operation first suggested in that book, and soon afterwards performed by Sir Astley Cooper with much success, was the origin of the recent improvements in this department of Surgery. The modification of this operation, termed lithotrity, I likewise showed to be anything but an improvement of it; nor can I doubt that the irritation and disease of the bladder so often caused by lithotrity will ere long bring about the restoration of the original proceeding, in which the breaking of the stone was intended to be subsidiary, and in certain cases only, to the slow and painless dilatation of the posterior part of the canal.

It is in allusion, doubtless, to this investigation that M. Civiale remarks, (page 9,) "that one may justly reproach Mr. Arnott for not rendering that justice to others which he claims for himself;" and the remark is prefatory to the statement, that I had given credit to Hunter for the invention of an operation which was really of French origin. And, again, in acknowledging the revival and recommendation in my work of incision in certain cases of stricture, he adds the sarcasm, that I had advised certain methods, "sans trop me preoccuper de ce qui avait été fait."

The utter want of foundation of the accusations contained in these two passages will appear from the following extracts from my Treatise on Stricture. The first has reference to the operation of *boutonniere* or the external incision of stricture. Now, though I certainly mention a peculiar kind of such incision, applicable to a specific case, as a proposal of Hunter's of *boutonniére* generally I speak in the following words, page 183, "It was once the usual practice, in obstinate cases of stricture, and may still be necessary in some very rare instances, to cut down upon the obstruction from the outside, divide it with a knife, &c.: and in the preface the following passage occurs, prefatory to the quotation of a severe condemnation of this operation, and censure of English surgeons for adopting it, from an article on Urethrotomy, in the "Dictionnaire de Médecine et Chirurgie Pratique:"—"The French, with whom this practice, under the name of *boutonniére*, was in former times not uncommon, now speak of it in such terms as the following," &c.

That the second passage in M. Civiale's book has as little foundation as the first, will be evident by a reference to the chapter of my work which treats of the incision of stricture. The piercing of impermeable stricture is there expressly mentioned as an operation "recommended in books of surgery." Slitting or incising stricture, by a lancetted stilette, I say, "has been proposed for the purpose of accelerating the cure;" and I go on to describe a particular instrument intended for the purpose, of which "I had read somewhere." It is an amusing circumstance, and shows how easily a reputation may be gained by a little prudent silence respecting the books or propositions of others, even of one's own contemporaries,—that no English writer, whose work appeared several years after mine, should be generally considered, not as the reviver only, but as the inventor of the internal incision of stricture!

In the second edition of the Treatise on Stricture I have remarked that the several methods of cutting stricture there described, "may have been better received than perhaps they deserved, from the notion that they were new; but although a perusal of the foregoing observations will show that this idea was erroneous, it would be wrong to conclude, because a remedy has fallen into disuse, that it must have been abandoned with just cause." I quote this passage in reference to Mr. Syme's recent proposal, to cut stric-

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ture on a grooved staff previously passed into the stricture; for it appears from some remarks of Dessault, (Œuvres par Bichat, vol. iii. p. 331,) that this operation, doubtless re-invented by Mr. Syme, was formerly practised. Dessault condemns it, because, he says, when you can previously introduce a grooved staff, you may as well introduce a catheter, and thus re-establish a channel for the urine. That this milder and safer measure may sometimes be sufficient, is true, but that it is generally insufficient is no less the truth; and Mr. Syme's recent work on Stricture, whatever may be the fate of his own proposition, has done much good by rousing the attention of surgeons to the duty of endeavouring, by some better means than the merely palliative treatment generally employed, to rescue the many persons labouring under stricture from the immediate dangers to which they are exposed, and the certain, though slow, destruction of health attendant on severe urethral disease. I have alluded to this subject in some prefatory remarks to a recent reissue of my work on "Stricture of the Urethra."

JAMES ARNOTT.

THE HOMŒOPATHIC REMEDY FOR DISLOCATION OF THE SHOULDER.

To the Editor of THE LANCET.

SIR,—In the report of a meeting of homœopathists, given in the *Times* a short time since, I noticed the name of Dr. Epps, who is there described as having treated his audience to a homœopathic ditty. I had often heard of the name of that gentleman, but never had an opportunity of seeing him until the occurrence of the following circumstance, the publicity of which, at the present time, may prove a little amusing, whilst it tends to show the extent to which homœopathists endeavour to carry their delusions:—

Passing along Holborn, about three years since, my attention was arrested by the sudden disappearance of a gentleman wearing a remarkably white hat, who was approaching me on horseback; considerable excitement appeared suddenly to prevail, and a crowd was immediately collected. On inquiry, I learned the cause to be, that, owing to the slippery condition of the wood-pavement, the horse of the gentleman with the white hat had fallen, and it was feared the rider was killed. When I arrived at the spot where the occurrence took place, I caused him to be moved into a shop at the corner of Red Lion-street, in a state of unconsciousness, when, on examination, I found the right shoulder dislocated. In a little time consciousness was restored. Having satisfied myself that no further mischief existed, I explained to the gentleman the injury he had sustained, when he requested me to get from his coat pocket a case. I accordingly found a good-sized silver snuff-box filled with homœopathic preparations, on which was engraved "Dr. John Epps." For the first time I beheld the well-known agitator, who, with an air of affected conceit, desired me to put twelve drops of arnica, which I would find in the case, into a tumbler of water, the application of which to the shoulder, he declared, would instantly reduce the dislocation. He descanted very freely on the propriety of my adopting his advice, and of the superiority of homœopathic treatment in his then condition. I denounced him at the time as a humbug, and his advice as a mockery and a delusion. I had him directly conveyed in a cab to his house, where the dislocation was speedily reduced *secundum artem*, the sturdy little globulist having first been permitted to try the power of his homœopathic remedy.

I am, Sir, your obedient servant.

WILLIAM O'CONNOR.

George-street, Portman-square, Aug. 1851.

TREATMENT OF DIARRHŒA AND CHOLERA BY SULPHURIC ACID.

To the Editor of THE LANCET.

SIR,—My friend and old pupil, Mr. Buxton, having some time since communicated his views to me as to his method of treatment in cholera and diarrhœa, by sulphuric acid *alone*, I embraced every opportunity of testing its efficacy.

I can now state that I have prescribed it in numerous cases, and with the most satisfactory results. I have not as yet met with one case in which it has failed to stop the sickness and purging.

I may add, that such has been the success I have met with in the administration of this remedy in cholera and diarrhœa, that I regard it almost as a specific. I have just received the accompanying letter from Mr. Buxton, which will explain his views.

I am, Sir, your obedient servant,

WILLIAM GRIFFITH.

Eaton-square, August, 1851.

August 23, 1851.

DEAR SIR,—In compliance with your request, I beg to send you a few hasty remarks on my treatment of cholera by sulphuric acid *alone*.

My attention to this treatment was first drawn some years ago in consequence of having read in a provincial paper that colica pictonum was cured by sulphuric acid; this led me to the use of sulphuric acid in diarrhœa.

I have for some time treated cholera with *sulphuric acid only*, and I find it a perfect specific. In common cases of cholera I give a scruple of the diluted sulphuric acid in an ounce of water: my usual form is diluted sulphuric acid, two drachms; compound tincture of cardamoms two drachms; water five ounces and a half; with directions to take two tablespoonfuls directly, and to be repeated after every loose stool, or vomiting; and every four hours afterwards. The first dose seldom fails to stop the purging and vomiting, but still a little nausea may be felt at the stomach, with a little pain, for which reason I direct the dose to be repeated every four hours. I seldom have occasion to prescribe twice; the bowels in a day or two, act of themselves, and the appetite quickly returns. In severer cases, where there is violent cramp, I give first a draught of half a drachm of the diluted sulphuric acid in one ounce of water, and then prescribe the above mixture. In cases of collapse where the pulse is scarcely perceptible, with cold clammy sweats, and a constant purging, &c., I give half a drachm of diluted sulphuric acid in a tablespoonful of water, and repeat it every quarter of an hour, till first warmth gradually returns, the purging stays, and the pulse becomes stronger, when I gradually give less doses at longer intervals.

In my first commencement of the use of sulphuric acid in cholera, I was afraid to use it alone, and I prescribed opium with it; though the purging stopped, the sickness frequently was but little abated, with often pains in the head; which induced me to leave out the opium, when I found the sulphuric acid was the better remedy without it. Occasionally I have given the sulphate of magnesia, or some other purgative, with the acid, or the day after, but I now find this needless. If my patient is weak I frequently prescribe three grains of sulphate of quinine, with one scruple of diluted sulphuric acid, in one ounce of water, two or three times a-day.

I have seen all the other usual remedies fail in the treatment of cholera. In 1832, calomel in large doses, with and without opium, had its advocates; but the patients died. Oil of cajeput, though a powerful adjunct, failed. Transfusion of salt-water, and of blood,

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I only saw once tried, when the patient died. In after years I have used colchicum with success, but all the cases were slight, so that I am unable to state its value in the stage of collapse. Brandy and opium, though powerful stimulants in the stage of collapse, often prove inert. The inhaling of sulphuric ether in the last stage, I have not used. Purgatives and astringents are also known to fail. Sulphuric acid I have never seen used but in my own practice, nor had I seen or heard of its use until you directed my attention this morning, in the library of the Royal College of Surgeons, to a communication of Dr. Cox on the subject. I have not yet found it to fail, although employed in the stage of collapse. The remedy is pleasant to take, produces not that dislike usual in taking medicines, and if once in the stomach is retained, though water given immediately before is ejected. I remain, yours very truly,

T. BUXTON.

W. Griffith, Esq.

KOUSSO AND TÆNIA.

To the Editor of THE LANCET.

SIR,—I reported in your journal, some months since a case of successful use of this remedy in tænia, for a Mr. N. S——, of Ipplepen. About two months after, he again passed joints of a worm; and I obtained, through the kindness of Mr. Savory, of Bond-street, another dose, and administered it as the preceding one, which brought away, in a few hours, a large tænia lata, measuring twenty-four feet in length, with, apparently, the head. About a month or six weeks since, he again became annoyed by passing joints of worms. My partner, Mr. Manley, of Ipplepen, gave him a portion of a second supply from Mr. Savory, of about three drachms, a like dose having been given effectually to another patient. This acted quite as well as the full dose, and ejected in a few hours, with the aid of a Seidlitz powder, a tænia solium, quite as long as the others. The two first, of different kinds, are in my possession; the last, in the patient's.

The circumstances of this case show pretty clearly that the entozoon is generated anew in the alimentary canal, from a depraved state of the stomach or bowels; and that a much less dose of the remedy is equally efficient in expelling it.

I have the honour to be, Sir,
Your obedient Servant,
WILLIAM WILLIS.

BARONS LIEBIG AND BERZELIUS AND THE EDINBURGH REVIEW.

(LETTER FROM DR. MUSPRATT.)

To the Editor of THE LANCET.

SIR,—Noticing in the July number of the Edinburgh Review an unprovoked, and, I may add, an unjust attack upon the Physiology and School of Liebig, I, as a prominent member of that school, feel called upon to refute the aspersions thus gratuitously made public: but at the same time I shall endeavour to frame my observations upon the merit which from many years' experience I know to be due to the researches and teaching, rather than upon the sterling moral worth, of that distinguished *savant*.

For the information of those who are less fortunate than myself in becoming acquainted with the lucubrations of the journal which, by a similar hasty and incorrect judgment, obtained an unenviable notoriety in its criticism on the author of "Childe Harold," it should be stated, that the occasion of its present appearance in the lists is to afford a curt report of the progress and extent of chemistry, an article resolving itself into a specific review of the labors of the late lamented Berzelius in that field: and, as though the writer's conception could only take cognizance of one luminary at a time, in the expansive horizon of science, he, in his zeal for the fame of his Swedish *protégé*, is determined to run tilt with his German competitor.

Premising that, to the history of chemistry in its application to physiology, Liebig "has not only contributed a large stock of direct and peculiar knowledge, but impressed nearly the whole subject, for the present, with the ardent and speculative character of his own mind," he adds, "it forms a fine study to the chemist, to place, side by side, the mental characteristics of the older Berzelius and the younger Liebig, as inductive philosophers. The slow, calm caution of Berzelius, who trusted little to theory, and never confidently adopted any views in support of which sound reasons or carefully obtained experimental results could not be adduced, was admirably fitted for basing the incipient science upon a sure foundation." Chemistry is peculiarly a branch of experimental philosophy, and demands the fullest exercise of analogical reasoning, together with acute observation. Viewed in this light, and admitting the claim of *caution* thus advanced, how inexplicable becomes the conduct of Berzelius, when, with a desperate determination to support his theory of the *catalytic force*, he attributed to this newly-fledged and unknown agent, three widely different effects—viz., the power of spongy platinum to facilitate the combination of gaseous substances; that of yeast to resolve sugar into alcohol and carbonic acid; and that of sulphuric acid to split alcohol into ether and water. Where, then, was the "slow, calm caution" of the "older Berzelius"? Did it not rather, in this instance, run riot, and revert into the "impatient and confident style of the younger Liebig"? whilst the latter, condemning the employment of the convenient phrase "catalytic force," designated it "*the unknown cause of phenomena not further investigated*;" and remarked, "it will at once be evident, that, with its admission, all further inquiry into the true causes will be at an end." How, with the knowledge of this great error on the part of the subject of his panegyric before him, could the author of "Modern Chemistry" commit so gross a violation of literary courtesy towards one of the greatest philosophers, by assuming a complete lack of caution on his part, whilst, in the same sentence, he vauntingly attributes to Berzelius the failing of "trusting little to theory, and never confidently adopting *any views*, in support of which sound reasons or carefully obtained experimental results could not be adduced."

Facts are at all times stubborn things; it is easy to assert that such were the characteristics of these two great *savans*: but in what position does the ill-timed preference of friends sometimes place men, when it leads to comparison! Berzelius was truly a great man; but as an aspersion is cast upon the merits of one equally great, it would be unjust to allow such a statement to pass unchallenged. Liebig's labours and instructings have effected a marvellous revolution in the republic of science, and his happy method of communicating the results of his investigations, and his anticipations of the ultimate applications of chemical knowledge to the conveniences and necessities of the human family,—these have given to his writings an interest, even amongst the uninitiated, not far short of that, to borrow the language of the Reviewer, which was "awakened by our first perusal of 'Ivanhoe.'" That such a man should possess an immunity from attacks, would be a fate unparagoned in the natural history of genius; still

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"Shall we own such judgment? No, as soon
Seek roses in December—ice in June"

It is well known that so early as the year 1844 an estrangement took place between Berzelius and Liebig, during which the former, in the most unmeasured terms, denounced what he was pleased to name, the "probability theory" of the Giessen school. His attack gave rise to a remonstrance from its founder, who, at the same time, cautioned Berzelius of the risk he ran of lying under an imputation of inconsistency, in upholding objections to a doctrine which he had formerly espoused. Subsequently the criticisms of the Swede assumed a tone of bitterness unworthy of him, whilst the rejoinders of his rival remained mild but firm. During the continuance of this painful controversy, Liebig was assiduously prosecuting his inquiries into the recondite laws of the animal and vegetal organism, and at every step obtaining a confirmation of nearly all the hypotheses he had previously advanced; whilst for four years antecedent to his avowed opposition to Liebig's views, Berzelius had ceased to take any part in experimental investigations of the questions which then arose in the science, *his whole mental powers having been directed to theoretical speculations*. Upon this state of the dispute, Liebig very pertinently remarked—"As long as he (Berzelius) pursued experiments, and confined his inferences to them, the results he obtained were safe and trustworthy guides in the field of science; but a new domain, foreign to him, has since been cultivated with success; phenomena have been observed contradictory to views formerly held, and inexplicable upon principles derived from the acquisitions of science at that time. This has led to new modes of explaining the phenomena observed, irresistible to all those who have been themselves experimentally engaged in their investigation; and it is the contest of the former with the latter—the necessary consequence of the progress of science—upon which Berzelius has entered in the spirit of a partisan: a contest, the final result of which it is not difficult to foresee. When Berzelius first entered upon his career, many hypotheses prevailed, which he did not hesitate to combat in the interest of science; he went farther, and history shows with what success he substituted, by his indefatigable investigations, better theories in their place. It is in the very nature of science that many of his views should meet the same fate; more correct theories, notions nearer to truth, must at length replace them, and it is thus only that the truth, which is the aim and object of our researches, will at length be attained.

"To combat these more modern views with reasons derived from observations made long since, and without deigning to enter anew upon personal investigations as to their truth, has been the way taken by Berzelius of late; a way which obviously cannot lead him to his object.

"Every author of a long and laborious investigation has an undoubted right to draw his own inferences as to the nature and composition of the bodies he discovers, to assign to them a name, and to express them by formulæ. What part has Berzelius taken in these investigations? Has he shown the incorrectness of these formulæ by new experiments? Has he proved the fallacy of the inferences and conclusions by placing them in opposition to the results of his own experience? Nothing of the kind. Why, and for what reason, then, does he alter the formulæ of the chloric-ether compounds of Malaguti, of the naphthaline compounds of Laurent, of the Benzoyle compounds and the products of uric acid, with an arbitrariness hitherto unexampled? Why does he admit into the composition of these substances compounds which either do not at all exist, or, to say the least, the existence of which is very doubtful. Has not his fixing the formula of cerebrote, cephalote, stearoconote, the formation of piotic, hypopiotic, and piotinigic acids, shown how little was gained thereby, and to what errors want of personal experience in this department led him.

"None of those chemists whose labours Berzelius thought thus improved adopted his views, and therefore an irreparable breach could not fail to ensue between them.

"Never, under any circumstances, would Berzelius have endured this kind of tyranny from others; he would have repudiated it with all his might; and that this has not yet been done to him by other chemists arises simply from the high esteem in which he is held for his immeasurable labours."

Such is the nervous refutation of a charge of advancing novel and indigested dogmas, by a generous and noble-hearted rival. How little do we trace of the coarse invective with which Liebig is subsequently charged with having employed, when exposing the false premises of other chemists, which provide subject matter for further accusations. Gerhardt is particularized as having incurred the censure of this eminent chemist, by publishing a paper in which he stated that a good method of obtaining valerianic acid was by the action of potassa on indigo. "The process," says M. Gerhardt, "is very simple;* indigo is projected in small portions into hydrate of potassa in a state of fusion; the indigo dissolves in the fusing potassa, *with copious evolutions of ammonia* and hydrogen gas. The residue contains carbonate and *valerianate* of potassa." This method was brought before the French Academy, by Dumas, as a truth. Gerhardt also affirmed, "that upon dissolving brucine in nitric acid, nitrous ether is formed." The formation of this compound from a substance which contains neither alcohol nor ether, appeared to Liebig so startling and important in the history of the ether compounds, that he repeated Gerhardt's experiments. The result may be anticipated;—*no such compound as nitrous ether appeared*. Liebig remarks the following with regard to the indigo.

"Large portions of valerianic acid may be prepared in the course of an hour, *according to M. Gerhardt's statement*. Now this experiment has been repeated by several chemists, and among others by Dr. Muspratt, with the greatest care and attention, and upon the very purest indigo; and these experiments have proved *that not the slightest trace of valerianic acid* is to be produced from indigo, and that the action of potassa upon indigo does *not give rise to the evolution of ammonia*.† These two discoveries of M. Gerhardt are characteristic of the man."

Were not these errors, to use the mildest term, sufficient to excite the just indignation of a man like Liebig?

Captious to a degree, the critic next descends to the consideration of what appears to him to be a pecuniary transaction, and "leniently regards" the universally accredited connexion of the object of his spleen with the patent laws. Save the mark! Is Liebig the only great man who has merited rebuke for having "outraged the dignity of pure science, and disgusted and alienated many of his admirers," by a mercantile transaction! Had not, however, the satirist better determine the fact of a mercenary object on the part of the Baron, before he gives vent to the calumny? Are there not on record various instances of a patent being obtained with a view to protect the public against fraud and sophistication, or as a

* Comptes Rendus, 18, p. 962.

† Ann. der Chem. and Pharm. vol. ii., page 271, and Transaction of the British Association for 1845.

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security for the inventor's character, rather than with a mere prospect of pecuniary aggrandizement? But on the part of the German Professor, suppose I put in a plea of guilty to the "soft impeachment," does he stand alone in all the deformity of endeavouring to realise a fortune by the exercise of his talents, whether of a literary or scientific character? Did literature ever suffer in its dignity by the hard bargains struck between the illustrious author of "Waverley" and his publishers? Was it ever considered that the lightest shade was cast over its effulgence by the pecuniary compensation for mental labours claimed by that giant of erudition, Dr. Johnson, or those sums received by Goldsmith, Pope, Thomson, and a host of others who have bartered the product of their pen for the means of securing the commodities of physical existence or comfort; or, to quote again from a work which must be most familiar to a "Scotch Reviewer," would Byron have ever satirically sung—

> "To Jeffrey go, be silent and discreet,
> His pay is just ten sterling pounds per sheet,—"

had he not been provoked by the unmerited flagellation he was subjected to by the very journal which now decries the just rights of superior knowledge. But to leave the labourers in the field of literature to effect the best arrangements they can for relieving the toil of business, the irksomeness of disease, the *ennui* of idleness, and the mental tension of science, and allowing them and their publishers the fullest privilege contemplated by copyright, allow me to ask whether it would be just to apply this new doctrine of impropriety to the fortune realized by the late Dr. Wollaston from the working of platinum ores? or to Professor Brande, who now, and very properly, accepts large fees for analyses, which are afterwards advertised by the persons who engage him to perform them? But without multiplying queries, whose only answer must be a negative, I would boldly assert that every chemist who makes a discovery applicable to commercial requirements, has a perfect right to seek the reward which is ever due to the exercise of intellect, whether by patent or sale. Science can only be outraged by the dissemination of illogical theories and imperfect results, &c.: against such every honest man and every true lover of science will very properly declaim.

Of the Giessen school little requires to be said. Let the tree be judged of by its fruit. After twenty-five years of a most active existence, during which time it has issued to the world a larger amount of original investigations than all the other schools put together, and has given to Europe and America an unprecedented number of disciples and teachers, we find that *whilst not one practical operation emanating from the original laboratory has had its results refuted*, the same proud distinction is claimed on behalf of several of those pupils who have studied at Giessen. Besides, these pupils,—whose name appears to be legion,—are occupying positions of the highest eminence, and by their zeal and success establishing a character which must reflect the greatest dignity upon the master mind which directed their earliest steps through the mazes of the science. On the Continent nearly all the leading chemists were the pupils of Liebig, whilst in this country we have Gregory and Anderson in Edinburgh; Thomson and Penny in Glasgow; Blyth and Kane in Cork; Ronalds in Galway; Andrews in Belfast; Frankland, Smith, and Schunk in Manchester; Richardson in Newcastle; Stenhouse, Brodie, Francis, Playfair, Hofman, Williamson, &c., in London; and Horsford in America.

My laboratory has hitherto received an amount of public attention highly flattering; and as it must be considered an offshoot from the more prominent one at Gissen, its success adds to the lustre which encircles the parent institution. Individually, I shall ever consider it a most fortunate circumstance that my attention was early directed to the German school, as there I had the advantage of witnessing the most scrupulous appeal to the balance upon every occasion of doubt, trial, and difficulty; which must have been gratifying to Berzelius, even in the moments of his morbid fastidiousness. By this, Liebig has established a fame more durable than could possibly hinge upon the mere promulgation of theories, be they ever so startling or plausible, or the authorship of treatises overflowing with romance.

One word to the Reviewer, and I have done. Remember, when a theory in experimental philosophy, founded—as that of the Giessen school—on reasoning from established facts, is attempted to be cancelled, it demands, not merely *new views* and *broad assertions*, unsupported by data, *but carefully conducted experiments and well grounded facts.*

DEATH BY HANGING.

A post-mortem examination was made twenty-four hours after death, upon two negroes, Henry and Moses, executed at Nashville on the 21st February, 1851.

The brain was congested in both cases. The vessels supplied with blood from the carotids were tinged with blood of a dark venous hue; those supplied by the vertebral arteries preserved their natural aspect, the blood retaining its scarlet arterial colour. The two kinds of blood were very distinctly seen at the termination of the basilar artery in the circle of Willis. The sinuses of the dura mater were full to distension.

In both subjects there was considerable effusion of serum into the arachnoid cavities, sub-arachnoid cellular tissue, and ventricles—to such an amount as probably to have caused serous apoplexy. There was no extravasation of blood in any part, nor any appreciable lesion of the cerebral substance. There was no fracture, nor serious luxation of the cervical vertebræ. In both cases the lungs were very much engorged, and had the dark purplish tinge of *splenization*. By pressing any portion of the lungs between the fingers, the pulmonary tissues were made to assume their natural colour. The blood was fluid in every part of the body; venous congestion was very marked; the left side of the heart was empty; the right side was full.

The *mark of the rope* around the neck was left, looking as if the skin had been seared with a hot iron: and there was a contusion of the superficial layer of muscles corresponding with the impression on the surface. In Henry, much the heavier body of the two, the sterno-cleido-mastoid muscle was nearly severed, leaving only a few fibres on the right side opposite that on which the hangman's knot was placed.

In the thorax of Moses an abscess was found nearly ready to burst; it contained three or four ounces of pus. This being evacuated, it was ascertained that the 4th and 5th dorsal vertebræ were carious, and the intervertebral substance was nearly destroyed. All the lumbar vertebræ were carious, and an abscess was formed on the right side, containing about half a gallon of purulent matter. On the left side was a smaller abscess. There was also a small abscess on the right elbow-joint. Yet there was nothing in the external appearance or configuration to indicate that he was not a healthy negro. There were extensive pleuritic adhesions in both cases.

Inspection of the bodies a few hours after the execution showed that there had been an emission of semen (liquor prostaticus?) from both, but no relaxation of the sphincter of the anus or bladder. There

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was some tumefaction of the face and lividity of the lips; the eyes wore their natural appearance. The jaws were firmly locked; the tongue protruding slightly, and deeply indented by the teeth; *rigor mortis* had not taken place in the limbs. The bodies were still warm.—*R. M. Porter, in Boston Medical Journal, July.*

CASE OF LITHOPÆDION.*

On the 4th of April Hr. Virchow examined the body of an insane patient, aged fifty-six years. At the age of twenty-three she had considered herself pregnant; the time of delivery, however, passed by, and she remained childless. She subsequently became insane. The tumour had gradually decreased in size, but was still perceptible.

On examination, the omentum was found atrophied and adherent to the abdominal parietes. An irregular shaped mass extended from the pelvis to the sternum, having the form and size of an extruded fœtus, and was connected in various directions to surrounding parts by vascular adhesions. The cæcum was pushed upwards. The tumour appeared to be situated behind the peritoneum, but was so loosely attached that it was removed without difficulty. The head was found in the region of the left kidney, the nates in the right iliac fossa, the spine in contact with the lumbar vertebræ of the mother, the thigh lay over the uterus, the right arm lay under the sternum, the left arm was in contact with the head, and was attached by firm adhesion.

This mass was united by organised adhesions to another moderate-sized tumour occupying the place of the left ovary, and was connected with the Fallopian tube of that side. This body consisted of two slightly convex hemispheres, which were attached posteriorly to a tolerably smooth fibroid layer. On dividing these, their anterior surfaces presented a rather firmly adherent calcareous layer, deeper still a reddish transparent gelatinous mass, and, lastly, below this appeared a whitish, greasy, fat substance.

The uterus was much enlarged, the vagina greatly contracted, the body of the uterus drawn to the left side: the right side of its fundus enclosed a hard fibrous substance.

A microscopical examination determined that the double hemispherical body in the left side of the pelvis was the remains of a placenta. The fatty substance was probably degenerated chorion, and the gelatinous mass consisted of altered blood. The remains of the umbilical cord could be traced from the anterior surface of this tumour, passing between the legs of the fœtus to its place of insertion. The fœtus was entirely enclosed in a smooth, distinct, thick skin, perforated by vessels from the false membranes with which it was connected, and was studded all over with small calcareous laminæ. The head was so continuous with the body that its limits were only indicated by tufts of matted hair. The unaltered cutis was readily detached from the trunk, from which it was separated by a white, tallow-like deposit. Almost all the organs and permanent tissues were in their normal condition; the cerebral matter alone had undergone a change, having been transformed into a dirty, greyish-white, tallow-like mass, which was tightly compressed by the surrounding bones. The female generative organs were perfect; the eyes were present, but much shrivelled.

The author considered that this had been a case of ovarian pregnancy.—*Verhandlungen der Physicalish-Medicinischen Gesellschaft in Würzburg.* 1850.

* Lithopædion, das steinkind die versteinerte Leibesfrucht (an *ossified fœtus*.)—Kraus, *Medicinisches Lexicon.*

INFLAMMATION OF THE LARYNX FROM ACCIDENTAL CAUSES.

The three following examples of inflammation of the larynx, brought on by accidental contact with irritating substances, may not prove uninteresting:—On the 20th September, 1849, I visited a lady labouring under premonitory symptoms of cholera, and prescribed the acetate of lead and opium pills in my usual form: they were quite effective in stopping the further progress of the disease, but one went the wrong way,—or, in other words, in the attempt to swallow it, passed into the larynx, and thus gave rise to fits of coughing, frequently repeated, until at last it was expectorated. These pills, being soft, were easily dissolved, and consequently, though the foreign substance remained in the air-passages but a short time, yet that time was sufficient for the contact to give rise to an inflammatory affection of the mucous membrane of the larynx, and a consequent hoarseness, which lasted for nearly a week. In this case the irritative substance was the acetate of lead undiluted.

In the case I am about to mention next, irritation was caused by the vapour of nitric acid, and the occurrence took place in the following unexpected manner:—I was requested, at the desire of Dr. Mahood, of Kingstown, to see an old lady labouring under chronic bronchitis. Amongst other remedies, I advised the application of St. John Long's liniment to the chest: it was sedulously applied night and morning. The room in which the patient lay was small; and a child, about two years old, slept in the bed next her, and was exposed to the inhalation of the air tainted with the vapour of the liniment: laryngeal cough was the consequence; it lasted for a few days, but was immediately diminished by the child being removed to another room.

In the third case more serious consequences had nearly followed a somewhat similar accident. I was attending, with Mr. Hans Irvine, a gentleman who had a chronic enlargement of the liver, and we advised the application of a nitro-muriatic acid lotion. His mother procured a bottle from a neighbouring apothecary, who marked it "concentrated nito-muriatic acid." She proceeded to mix some of this with water, for the purpose of making the lotion, when the fumes arising from the bottle caught her breath, and produced inflammation of the larynx and of the bronchial tubes, which had nearly proved fatal. I blame myself for not having taken the precaution to order diluted acid to be used in making the lotion.—*Dr. Graves, in London Quarterly Journal.*

THE COMPARATIVE FECUNDITY OF THE BLACK AND WHITE RACES.

Dr. E. M. Pendleton, of Sparta, Geo., in an article on this subject, published in the Charlestown Medical Journal, gives the following statements in proof that the whites are not more prolific than the blacks.

"By the recent census of Hancock Co., Ga., we have ascertained that there are 587 white females, between the ages of 20 and 40 years, which may be properly termed the child-bearing period of woman's life. There are, likewise, 1207 white children under ten years of age, being an average of 2·05 per cent. of children for each female. Of the blacks, including mulattoes, there are 986 women between 20 and 40, and 2392 children under ten, being 2·42 per cent. of children to the women. We infer from this table, that the blacks are much better breeders than the whites; and by consequence, the natural increase of the one race is as much larger than that of the other, as 2·42 is larger than 2·05. By what process of ratio-

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cination can we maintain the hypothesis, that our negro females are forever drenching themselves with nostrums, injurious to their health, and fatal to their offspring! One well authenticated table, like the above, is worth more as an argument, than all the plausible theories of the profoundest philosophers of the age."

He also shows, by an analysis of 2852 cases in his own practice (1822 of which were whites, and 1030 blacks) that the prevalence of diseases connected with sterility in females is greater among whites than blacks. "Of dysmenorrhœa, which is apt to induce incurable sterility, the ratio of blacks to whites, according to population, is 0·30 to 0·14, showing that the whites are subject to this disease more than two to one. Of menorrhagia, it is 0·16 to 0·10. Of prolapsus uteri, 0·26 to 0·09, nearly three to one. Of amenorrhœa, that disease in which conception is next to impossible, it is 0·23 to 0·09. Leucorrhœa, 0·11 to 0·06; and abortion, 0·40 to 0·51—showing the tendency to abortion larger in the black female than the white, while in every other disease it is the reverse." —*Boston Med. Journal.*

PATHOLOGICAL DEVELOPMENT OF THE STRIPED MUSCULAR FIBRE.

Hr. Virchow relates that, in examining the body of a woman who had died with ovarian disease, he found connected with the tumour a band of flesh-like and fatty tissue, which, under the microscope, exhibited all the characteristics of striped muscle, as seen in the fœtus. The elements of this structure were long, tolerably broad, and tapering fibre-cells, generally containing oval nuclei, and exhibiting very distinct stripes. The nuclei were of the proportionate size, and contained one or more shining nucleoli. The nuclei were observed to be attached to the surface of the cell, and, in some parts, to be protruding through the membrane: at these points the stripes were less distinct. The nuclei appeared usually in the direction of the long axis of the cell, and where this was not the case the cell-membrane seemed to have been ruptured. The fibre-cells were so placed one towards the other as to present an imbricated arrangement. In some parts molecules of fat were seen, and some of the fibres seemed to be undergoing fatty degeneration. —*Verhandlungen der Physicalisch-Medicinischen Gesellschaft in Würzburg*, 1850.

ABSTRACT OF THE IRISH CENSUS RETURNS TAKEN IN THE YEARS 1841 AND 1851.

The facts shown in the annexed tables may be expressed in the simplest language. The population of Ireland is less by nearly a million and three-quarters than it was ten years ago, and less than it was thirty years ago by 300,000. There are in the same country at the present time 269,300 houses less than there were ten years ago; that is to say, that in this brief period, making allowance for the ordinary increase of population, more than two millions of men, and more than a quarter of a million of human habitations, have been swept off the face of the country. It is said that emigration will explain much of the source of this awful state of things. We doubt it. Famine, fever, dysentery, cholera, are, there is too much reason to fear, the agents which have created an episode in English, or rather Irish history, which can be paralleled by that alone of the Indian tribes of North America, or some other aboriginal population falling before the spread of civilization. There must be much difficulty, however, in solving this lamentable problem; there is no regular registry of deaths in Ireland. It is true that the commissioners, Messrs. Donnelly and Wilde, have asked in their returns for the number of deaths which occurred in each family since the last census; but how many are the families who have been altogether carried off, and for whom there can be none to answer? This source of fallacy must not be forgotten in any attempt at an estimate of the number of deaths in Ireland since the last census. The facts, we repeat, are simple; not so the explanation of the desolation of one of the most fertile countries in the world, and one occupied by a people, from whom, whatever may be the habits and characters of the majority, have sprung some of the brightest ornaments of every phase of public and professional life. Let us hope that it may never again fall to our lot to dwell on a catastrophe so deplorable.

Years.	Houses			Total.	Families.	Persons.		
	Inhabited.	Uninhabited.				Males.	Females.	Total.
		Built.	Building.					
1841.	1,328,839	52,208	3,313	1,384,360	1,472,787	4,019,576	4,155,548	8,175,124
1851.	1,047,735	65,159	2,113	1,115,007	1,207,002	3,176,727	3,339,067	6,515,794
Increase or decrease.	—281,104	+12,951	—1,200	—269,353	—265,785	—842,849	—816,481	—1,659,330

Table showing the Population of Ireland from 1821 *to* 1851, *inclusive.*

Number of persons living in the years	1821	6,081,827
	1831	7,767,401
	1841	8,175,124
	1851	8,515,794

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Medical Facts, News, Items, &c.

BALLOON DESCENT AT A LUNATIC ASYLUM.—The veteran Green, having made his 485th ascent from Vauxhall-gardens in the Nassau balloon, on Monday evening, accompanied by a party of gentlemen, effected a safe descent on the lawn in front of the Surrey County Lunatic Asylum. Many of the patients, who were enjoying their evening amusements, immediately assisted him in securing the balloon, and rendering him the required assistance. It being the intention of the company which consisted of a party of military officers, again to embark at dawn of day on an aerial voyage, the descent was accomplished with scarcely any loss of gas. Balloon ascents being now of so frequent occurrence, they scarcely deserve any notice in a public journal, but it is with much pleasure that we record this, being a practical illustration of the great improvement which has been effected by Dr. Conolly, and others following his humane views, in the treatment of the insane in this country. Here a large quantity of afflicted persons immediately rendered the required assistance; and, although the extensive grounds soon became visited by neighbours from all directions, with whom they mixed, they cheerfully returned to the wards of the building, without any mischievous excitement from the event. Mr. Green and his friends having been received and made welcome by Dr. Diamond, they again ascended early in the morning, Mr. Green observing, it had never been his lot to alight in a more suitable or cheerful spot; his companions, some of whom had travelled much in foreign countries, expressing in very strong language the "immense humanity" now here displayed in the treatment of lunatics compared to similar establishments they had visited.—*The Times, Sept*, 10.

FELLOWSHIP OF THE COLLEGE OF SURGEONS.—The following were the questions submitted, on the 4th ult., on Anatomy and Physiology.

1. Describe the knee-joint, its articular surfaces and their form, the ligaments connecting the bones, the muscular attachments serving the purpose of ligaments to this joint, other muscles or their tendons passing over the joint.

2. Describe the parts seen on opening the abdomen, and their relative position. Describe the formation, extent and attachments of the great and little omentum, the peculiar characters of the small and large intestines, and the special circumstances distinguishing the duodenum.

3. Describe the membranes which invest the brain, the peculiarities of their structure and function. The remarkable circumstances distinguishing the arterial and venous apparatus of the brain from those of the other parts of the body.

4. Describe the boundaries of the perinæum, the parts contained within it, and their relations to each other.

5. Describe the parts exposed in dissecting the bend of the elbow, and their relative position.

6. Describe the circulation of the blood through the heart and lungs, with the action of the valves. Also the changes effected on the blood in its passage through the lungs, and in the general circulation.

The following on Surgery and Pathology were submitted on the 6th inst.

1. State the primary and secondary consequences of a wound into a joint, if adhesion of the divided parts do not speedily take place. Describe the treatment of such wound, and of its consequences.

2. Describe the symptoms and causes of a strangulated hernia. The treatment to be employed for its reduction. If an operation be required, what is its object, and what the circumstances which determine the return or not of the contents of the sac into the abdomen.

3. Describe the symptoms distinguishing concussion and compression of the brain. The kinds of compression and the period at which the symptoms appear. State the treatment of concussion and its effects, and generally that of the several kinds of compression.

4. Describe the causes and treatment of retention of urine from stricture. Also the causes, consequence, and treatment of extravasation of urine.

5. Describe the primary treatment of a wound made into the brachial artery in the operation of phlebotomy. State what happens to the artery if improperly treated on the occurrence of the accident, and what is then to be done under such circumstances.

6. Describe the consequences and treatment of a penetrating wound of the lungs.

BENGAL MEDICAL COLLEGE.—From the annual report of this valuable institution, for the session 1850-51, it appears that the number of bodies received for dissection and operation in the winter session, amounted to 722: of this, the number of bodies actually dissected was 501; the number used for operations, 92; used in the examinations, 23; for lectures, 38; and those of which no use was made, in consequence of rapid putrefaction, 68. From the same report it appears that the number of students attending the anatomical class was 73; in medicine and surgery, 28 each; in midwifery, 22; in chemistry, 89; botany, 81; and materia medica, 51. We believe the certificates of attendance are now recognised by the examining boards of London. Dr. S. G. Chuckerbutty, who had received his medical education in London, had arrived in Calcutta, with the degree of M.D. from the London University, and membership of the Royal College of Surgeons of England, was immediately employed in the Medical College Hospital, as assistant physician, and has performed his duties in a highly creditable manner.

MEDICAL INSTITUTIONS AT LIMA.—Lima, the population of which is about 85,000, has a medical school, where a great many efficient professors are appointed. The students are eighty in number, and are admitted in the four hospitals of the city. The Santa Ana Hospital is exclusively devoted to women, and has 700 beds; that of St. Andrew is for men only, and numbers 400 beds; the third is a military hospital, and the fourth an institution for incurable patients, with 80 beds. The latter hospital contains principally black people and mulattoes, affected with local chronic diseases, especially lepra and ulcers of a frightful description. In the other hospitals fever and dysentery are the most common diseases, partieularly among the poor. Small-pox destroys a great many patients, as also elephantiasis. In the winter bronchial affections are somewhat common, owing to the dampness of the climate.—*L'Union Médicale.*

SURGEONS AND LANDLORDS—A "LEVY" AFTER DEATH.—The Medical Association of the department of the Seine have just given one of their members very efficacious assistance, in a suit before a Paris court. The question was whether after the death of the patient, the landlord, or the medical attendant, had the first claim upon the goods and chattels. The Association took the matter in hand, freeing the surgeon from any trouble or expense, and they succeeded in establishing his claim. The court decided that

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in the case above stated, the medical attendant had the priority. This is another bright example of the force and influence our profession gains by frankly uniting in close array, instead of allowing single individuals to sink under the ingratitude and injustice of the public.

OBITUARY.—Died, at Berkely, Gloucestershire, on the 3rd inst., aged eighty-four, Henry Jenner, Esq., M.D., F.L.S. The venerable Dr. Jenner had a paralytic seizure about three months ago, from which he never recovered. He was the nephew and pupil of the celebrated Dr. Jenner, whom he assisted in his investigations leading to the discovery of the defensive property of the vaccine matter. He was also a pupil of the late John Hunter, to whom he was of great use, conjointly with Sir Joseph Banks, in forming his collection called the Hunterian Museum. Dr. Jenner practised as a physician for the greatest part of his life, in Gloucestershire. His attainments in natural philosophy were of a superior order. He lived much beloved by his friends and acquaintances, and died regretted by all who knew him.

THE LATE G. TURTON, Esq.—On the 5th inst. were committed to the grave, in our cemetery, the remains of the late George Turton, whose character has been sustained for a very lengthened period, in his profession, not only as a general practitioner, but especially as a surgeon-accoucheur in this now vast and populous town and district, in a manner most creditable and exemplary. He laboured assiduously for more than thirty years in the various vocations of a dignified, though oftentimes ill-rewarded profession; his efforts were mainly exerted in its most trying and harassing department, that of midwifery, not merely in the lying-in room, at the sick-bed side, but as a teacher in the science of obstetrics. Many years ago, when the Sheffield medical school was instituted, Mr. Turton was selected, and deservedly so, as lecturer on this, we regret to add, most neglected, yet all-important part of the medical practitioner's education. Mr. Turton was so convinced of the general want of knowledge in this respect, that during his studentship in Edinburgh, he became the clinical practising pupil of the late Dr. Hamilton, professor in that university, thus qualifying himself in a pre-eminent degree for the office of lecturer, which he so ably filled in the Sheffield school. His lectures were remarkable for their practical bearing. The book of nature was ever in his presence; with him, "facts were stubborn things." He would often repeat, "Gentlemen, meddlesome midwifery is always bad; these are my obstetrical instruments; observe their rusty state, for want of use, though I have had more than 11,000 cases, (speaking nearly twenty years ago.) From Mr. Turton's mind being so thoroughly and profoundly experienced, he was seldom led away by innovations, or in common parlance, 'isms,' which too often prevail and endanger the sobriety and steadiness of those in pursuit of medical science. On the introduction of ether and chloroform, Mr. Turton predicted their gradual disuse, as we believe is the fact. In the lying-in room he was ever humane and patient, and his success great, and we believe that he was frequently called into consultation, in difficult and dangerous cases, by his professional brethren. For several years Mr. Turton acted as surgeon-accoucheur to the Dispensary, and when he relinquished that office, owing to failing health, he was elected consulting surgeon-accoucheur for life. Mr. Turton was a devoted member of the Wesleyan association, and did not permit the harassing and exhausting duties of his profession to prevent him from discharging the duties of a lay preacher, to which he attended with regularity and ability. In politics, Mr. Turton was a warm friend of the liberal cause, earnestly promoting its advancement, and uniting moderation and zeal. He was one of the first members of the Town Council, and until last spring, was one of the aldermen of the borough. His kindly disposition, his readiness to be useful, his unobtrusive modesty, and his unwearied industry, gained for Mr Turton universal esteem.—*Sheffield Independent.*

CUTANEOUS AND MUSCULAR GALVANISM IN PARIS.—Dr. Duchesne (of Boulogne) supported by most of the leading physicians of Paris, has lately introduced a peculiar mode of therapeutically using electricity. He calls it localized electrization, and it is principally to the skin and muscles that he applies, either by contact or induction, the currents produced by his peculiarly constructed instruments. Among the affections under the control of Dr. Duchenne's electrization, are sciatica, muscular rheumatism, hyperæsthesia, anæsthesia, &c., &c. He likewise stimulates directly the nervous expansions of internal organs, in cases of paralysis of such canals: as the rectum and its muscles; the bladder (for which a staff ending in a knob is passed into the rectum, and a catheter isolated with India-rubber, except where it is to come in contact with the muscular fibres, is introduced into the bladder:) the uterus (for which cavity a peculiar instrument is used:) the pharynx and œsophagus: the larynx; and by the instrumentality of the pneumogastric nerve, the stomach, liver, lungs, and heart.

The inventor uses his peculiar method for the excitation of the organs of sense, and the genito-urinary apparatus. One of the most striking innovations of Dr. Duchenne is the clever manner in which he succeeds in exciting single muscles, this faculty being of vast importance in the treatment of partial paralysis. We had ourselves an opportunity of seeing the manner in which Dr. Duchenne causes the contraction of any given muscle, at a demonstration lately given by him, in London, at the house of Dr. H. Bennett, in the presence of several distinguished members of the profession. The experiments were made upon the face and the arm of a groom, who volunteered his services; and by a peculiar mode of adapting the electricity by induction, and the pole with which the muscles were singled out, the inventor was able to foretell what kind of contraction of the arm or grimace in the face would be made. Our readers will find in the *Archives de Médecine*, vol. xxii., p. 263, and the February and March numbers, 1851, satisfactory details on this new method, of which our description will only give a faint idea.

We should not omit to state that Dr. Duchenne closes a paper (*Archives*, May 1851) on the subject by these words: "As it will be useful to create a word which should exactly point out electricity by induction, as well as its application, may it not be allowable to use the name of the philosopher who has discovered this kind of electricity? Thus, in the same way as 'Galvani' has given his name to the electricity by contact, so can we likewise give to the electricity by induction the name of 'Faraday.' This electricity would then be called 'Faradism,' and its application 'Faradization.' Such names would establish a clear distinction between the electricity by contact and that by induction, whilst they, at the same time, render due honour to a philosopher to whom medical science owes a discovery far more valuable in a therapeutical point of view than that of Galvani."

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Yours very faithfully
Wm Ingram

THE LANCET.

Journal of Medical, Surgical, and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

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Clinical Lectures ON DISEASES OF THE CHEST,

Delivered at the Hospital for Consumption and Diseases of the Chest,

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LECTURE IV.

The pulse: general remarks on the causes of its modifications; average frequency in health; morning and evening pulse. Acceleration in consumption. Effect of posture in health contrasted with effect in disease. Practical illustrations. Speculations regarding the cause.

THE painter, when he would represent a physician, generally depicts him with a finger on his patient's pulse, as though the principal indications of disordered health were thence to be derived, and it must be acknowledged that such an idea has received countenance from some eminent medical writers. If, however, this symptom has been overrated, we must not on that account fall into the opposite extreme; and a little consideration will make it obvious that any important deviation from the healthy condition of the system can scarcely fail to modify the pulse. The terms of disparagement in which some authors, particularly Heberden and Falconer, have spoken of the pulse, is, in some instances, attributable to a deficiency of *tactus eruditus*, and a consequent inability to appreciate any of its qualities, excepting those of quickness and slowness. An expression of Celsus, which appears to me to have been misapprehended, has also become so fixed in the medical mind, as imperceptibly to confirm an unreasonable distrust of this indication. But the remark of Celsus to which I refer—namely, "Venis enim maxime credimus, fallacissimæ rei," —doubtless had special reference to feverish conditions, and was meant to enforce the importance of attending to certain qualifying circumstances, not to deter from the attempt to derive information from the pulse; otherwise he would not have added, in the same paragraph, that we know "eum non febricitare cujus venæ naturaliter ordinatæ sunt."

The pulse or diastole of an artery is obviously produced by the contraction of the heart; and the quickness, strength, and regularity of the pulse depend on the manner in which the heart fulfils its office. It is chiefly the elasticity of the arteries which prevents a succession of jerks, and renders the flow of the blood uniform, just as the elasticity of the condensed air of the fire-engine causes a continued stream, on the principle that any intermitting motion can be converted into a continued one, by making the original force compress a reservoir or spring which keeps up a constant reaction.

Elasticity, as shown by John Hunter, is most remarkable in the large arteries, whilst the muscular coat is probably most developed in those of smaller calibre—an arrangement rendered necessary by the fact that the conjoined diameter of the small arteries is much greater than of the large.

It will follow from these observations, that the structure, sympathies, and innervation of the heart and arteries, as well as the modifications of the circulating fluid, are all concerned in giving its character to the pulse. A full elucidation of this subject would require a treatise rather than a lecture; but these few observations may serve to give a philosophical and consistent character to your investigations in this interesting department of diagnosis.

Let me repeat that the strength of the heart itself, however important, is not the only element; modifications of the elastic or of the muscular coat of the arteries will exert great influence, and alterations of the quantity, and perhaps quality, of the blood are not inoperative. It may be difficult to determine to what extent these conditions suffer change in phthisis; but there cannot be a doubt that the disease, when established, is commonly marked by considerable deviation from the natural condition of pulse. The quality of pulse which has always attracted most attention is frequency. In a healthy adult male the average

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is from 70 to 75 a minute; in the adult woman from 75 to 80. Let us compare this average with the pulse of some of our patients. Of the men at present under my care in the hospital, the slowest pulses are those of W. G., 84; W. K., 80; P. D., 78; W. U., 72, and in all these cases the indications of phthisis are so slight as only just to warrant an opinion of the disease having commenced; prolonged expiratory murmur, and very slight inequality of movement in the two sides, being all you can detect in W. K., W. U., and P. D.; slight hæmoptysis being also present in W. K. In several cases which I next introduce, in the second or third stage, you find the pulse respectively, 112, 104, 116, 112, 100. If a man comes to you for medical advice with a pulse above 90, you may generally suspect phthisis from that symptom alone; for other diseases, when they quicken the pulse in so great a degree, generally unfit for exertion. Recollect, however, that the pulse may be relatively, when not absolutely quick. Some have naturally a pulse preternaturally slow. Thus the pulse of Napoleon was only 40 a minute. Such a pulse, if raised to 60, would be relatively as quick as a pulse of 120 in an individual whose natural pulse is 80; and you should remember that persons of tubercular constitution often have a languid circulation. Among twenty patients in whom the disease has attained the second stage—that of softening, whose pulses are entered in the list before you, only one has a pulse below 90. It is Honora D., in whom the cracked-pipkin sound is observable; her pulse is 88. Even this is considerably above the healthy standard, and it may safely be asserted that we have not at present a patient in the second or third stage of phthisis, whose pulse is not considerably accelerated.

Bryan Robinson and Falconer asserted that in healthy individuals the pulse is quicker in the evening than in the morning. This, as a general statement, is erroneous. When such occurs in those who seem to be healthy you may suspect the peculiar cerebral excitability termed by the Germans *kopffieber*. The valuable observations of Dr. Guy strongly confirm the conclusion of Dr. Knox, that in health, when any difference of frequency between these periods is marked, the morning frequency is greatest, or perhaps it would be more correct to say, that the degree of frequency, under circumstances of quietude, is the same; but that diet, or other stimulants, produce more effect on the morning than the evening pulse.

In the first of these respects, the pulse of the phthisical contrasts with that of the healthy individual. From the table before you it is obvious that the pulse of our patients is usually quicker in the evening; but you perceive that, as in health, it is less easily accelerated in the evening than in the morning by changes of posture. The respiration is usually quickest, as might be expected in cases where the amount of pulmonary disorganization is greatest. As yet I have not traced any remarkable difference between the frequency of the morning and evening respirations, nor any rule specially applicable to the phthisical as respects the relative frequency of the respiration and the pulse.

One of the most interesting circumstances regarding the pulse, viewed as an aid to the diagnosis of phthisis, has reference to the effect of posture on its frequency. Here, again, I avail myself of the exact and laborious investigations of Dr. Guy, who has shown conclusively, ("Cyclopædia of Anatomy and Physiology,") that if the pulse of a healthy person be felt first as he rests with the back supported in an easy chair, and then in the standing posture, a marked difference in frequency is observable, the difference increasing in proportion to the natural frequency of the individual's pulse. The healthy difference is shown in the following table of the rate of increase:—

Pulse of healthy adult, when sitting	60	80	100	120
Ditto, when standing..	66	93	119	147
Rate of increase	6	13	19	27

In the table which I next present, recording the pulse of patients now in the hospital, you see that with few exceptions the difference produced by change of posture is comparatively trivial, and that in several instances, especially in the evening, no difference whatever is observed.

The greatest difference is in the morning pulse of M. A. F., in whose case the only local ground for suspecting phthisis is wavy inspiration at the apex of the left lung. In S. J. D. the morning pulse also contrasts remarkably with the evening pulse.

There are three with a difference as tested this afternoon, of 12, viz.—C. B., who has emphysema, but no phthisis: S. A. B., in whom the other symptoms are undecided. The third exception is E. H., with a pulse at 100. The healthy difference is about 19: in E. H. the difference is 12, which exceeds the difference in the other consumptive men. This patient's pulse is small and weak the impulse of the heart imperfect, the first sound too much like the second, and the cardiac dulness on percussion too widely diffused. His heart is apparently thin and dilated, and the question arises whether this peculiarity may account for the fact that the influence of posture is more considerable in him than in consumptive patients generally. In cases of debility, change of posture produces so much more effect on the pulse than in the healthy state, that Dr. Knox regarded this indication as a kind of asthenometer. The importance of this fact in connexion with our present subject is obvious, since the debility associated with phthisis might be expected to counteract rather than to produce the inaptitude of the pulse to be modified by changes of posture.

There is an additional circumstance connected with the effect of posture in phthisis entitled to consideration. In health the difference of rapidity of pulse produced by a change from the sitting to the recumbent position, is only about half as much

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WOMEN.

Name.	Age.	Disease and Stage.	Pulse in Morning.			Pulse in Evening.			Respiration.		
			Sitting.	Standing.	Difference.	Sitting.	Standing.	Difference.	Sitting.	Standing.	Difference.
P. J.	22	Phthisis, 3	92	92	...	96	100	4	24	24	...
E. B.	23	Ditto, 1	80	84	4	124	128	4	...	...	...
M. A. F.	32	(?) 1	92	116	24	120	120	...	25	24	—2
M. B.	17	Phthisis, 3	100	102	2	100	100	...	22	24	2
S. J. D.	15	Ditto, 3	124	140	16	124	124	...	24	26	2
M. A. M.	16	Ditto, 3	96	104	8	100	108	8	28	28	...
H. D.	35	Ditto. 3	88	100	12	88	88	...	34	32	—2
M. A. G.	29	Ditto, 2	120	120	...	124	124	...	34	34	...
C. H.	41	Ditto, 1	92	108	16	92	92	—4	24	26	2
S. A. B.	18	(?) 1	88	100	12	92	92	...	44	44	...
M. M.	29	Doubtful.	84	100	16	...	...	...	28	28	...
Mary M.	29	Phthisis, 3	96	104	8	116	120	4	28	28	...
C. V.	20	Ditto, 3	112	116	4	120	128	8	28	28	...
M. B.	26	Ditto, 1	92	92	...	100	100	...	24	28	4

MEN.

J. L.	34	Phthisis, 3	100	108	8	...	...	...	32	32	...
W. J.	14	Ditto, 2	104	116	12	92	92	...	24	30	6
W. K.	46	Ditto, 1	92	100	8	100	108	8	28	28	...
A. S.	37	Ditto, 2	96	104	8	102	104	2	24	24	...
W. L.	32	Ditto, 1	96	96	...	100	101	1	20	20	...
P. D.	37	Ditto, 1	84	92	8	92	92	...	20	20	...
E. H.	18	Ditto, 3	100	112	12	100	112	12	24	24	...
W. H.	34	Ditto, 1	92	96	4	96	100	4	28	28	...
D. H.	26	Ditto.	88	96	8	92	96	4	18	20	2
C. B.	47	Emphysema.	...	...	...	80	92	12	24	24	...
T. C.	19	Diseased heart	76	76	...	73	80	7	24	24	...

as that produced by changing from standing to sitting; whereas, as far as I have observed in phthisis, the contrary rule appears to obtain. But not to detain you longer with general statements, let me bring the facts under your immediate observation. If any one of my audience in good health, will volunteer, we will examine his pulse. [Dr. —— came forward.] The gentleman who has been kind enough to be an example, I find, when sitting with the back supported, has a pulse of 74; but in the standing posture, allowing a little time for the effect of locomotion to pass off, it is 92. You will be struck with the close correspondence of this result with the table, which gives 13 as the average increase of beats produced by standing, on a pulse which is 80 when in the sitting posture.

Let us contrast with this result the pulse of some of our patients. Here is one, M. A. G. Place your hand alternately under the right and the left shoulder-blade as she speaks. You observe how much more of vocal vibration is communicated to the hand on the right side than on the left. Listen to the breathing. You find each inspiration on the upper half of the right chest in front accompanied with two or three peculiar clicks. This is a characteristic sign of tubercular affection in the second stage. Try her pulse whilst sitting: it is 124; on standing up, the same—still 124.

Here is another patient, P. J.: her pulse, when sitting, is 96; on standing it is 100, rising only 4 beats. Try whether the state of chest is such as the rule I am illustrating would require. There is dull percussion over the summit of each lung. On the left, under the acromial end of the clavicle, you find a bellows sound synchronous with the heart's contraction; at the sternal end a rubbing sound, produced, probably, by intercurrent pleurisy. Over the apex of the right lung you hear cavernous voice and respiration. There is some anæmia, and the pressure of tubercular lungs, under such circumstances, does sometimes, as in this patient, induce a bellows murmur, probably by superadding a disturbing cause to that induced by impoverishment of blood on the even current of the circulation. Supposing a person in health to have a pulse of 96, it should rise about 18 beats on standing; if anæmia were present the change should be still greater; but in the case before you the difference, you observe, is only 4 beats.

Let us examine one or two men, remembering that in males the healthy difference produced by change of posture is greater than in women. In this man, W. H——, you may hear gurgling at the apex of the right lung, when he coughs, proving conclusively the presence of vomica. In making percussion, I think you will be conscious of remarkable diminution of the natural elasticity.

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In placing my hand on the chest as he speaks, I have also an impression that the vocal vibration feels less than on the comparatively healthy side. If so it is an exception to the general rule, which would lead you to expect increased vibration, through tubercular lung, and this exception would be explained if, as I suspect, the tubercular deposition is in this case unusually diffused, and the bronchial tubes extensively obliterated. This patient's pulse is 100 when standing, 96 sitting, but the difference on lying down, when it sinks to 88, is remarkable, and in accordance with the rule which I have offered.

Look at one more patient, D. H——. I may tell you that his spirometer number is very low, but you see, from his general aspect, his long eyelashes, his gums margined in a way I may more fully describe to you at some future lecture, what you may expect. Under the left clavicle you hear the clicking rhonchus of softened tubercle. His pulse, sitting, is 92; standing, 96.

Examine, by way of contrast, the pulse of T. C——: standing it is 80; sitting, even without supporting the back, it soon goes down to 73. The reason is clear to you. This is a patient you have formerly examined, in whom you have detected cardiac disease and pleuritic contraction, but no phthisis.

These instances, taken as it were at random, may suffice to impress an obvious and interesting symptom of the disease. The explanation is not so easy. Is it that the heart, accustomed to a continuous cause of irritation, is less influenced by the trivial excitement which changes of posture might otherwise induce? or is there atrophy of the muscular coat of the arteries, and consequently less variety in the degree of influence exercised by this structure on the centre of the circulation? There is one analogy which may suggest a particular line of inquiry, in the fact, particularly observed by Dr. Graves, that the pulse of persons affected with hypertrophy of the heart is remarkably little influenced in its frequency by change of posture. Is the relative weight of the heart to the body generally greater in phthisis than in other diseases? The late Dr Clendinning investigated this question with much care, and determined it in the affirmative.

The book of post-mortem observations now before you supplies some materials towards the settlement of this question. It records the weights of the hearts of twenty-three men and of nine women. On adding the weights of the former, and dividing by twenty-three, I get eight ounces and nine-tenths—of the latter, and dividing by nine, I obtain a result of eight ounces and a third; in both instances, above the average of the healthy heart, and yet many of these subjects were very much emaciated. Should further observations be in harmony with these calculations, there would be so far an analogy between the heart in phthisis and the heart in a state of slight hypertrophy. The fact that the pulse of women and of children is less affected by change of the posture than that of males and adults, affords countenance to the idea that the condition of the muscular coat has an influence in the phenomenon so characteristic of phthisis; whilst the remarkably slight effect produced by emotion on the frequency of the phthisical pulse, lends support to the hypothesis which would assign as an explanation the pre-occupation of the heart with other sources of irritation. The three particulars at which we have glanced may possibly combine their influence, or it may be that the cause has yet to be sought, but of the fact I do not think any substantial doubt can be entertained. The hints with which I commenced this lecture may encourage you to expect considerable aid in diagnosis and prognosis from a careful examination of the pulse. In this, as in most things, there are two extremes to be avoided. You know that the Chinese were long accustomed to form their diagnosis from the pulse alone, not even seeing the countenance of their fair patients.

Dr. Rucco, in a voluminous work on the subject of the pulse, gives instances in which he predicted the sex of the fœtus in utero from the maternal pulse. "We examined," he says, "the pulse of the lady of the Signor Raffaelli, of Naples, and after repeated observations predicted that she would give birth to a male. To this opinion we were led by the difference we observed between the right and left uterine pulse. The first sensibly manifested its organic character, the latter not at all." Dr. Rucco states that "the prediction was verified by the event," and proceeds to give other instances which need not be here adduced, but you may be interested to hear an example in which this physician considers that he detected the influence of a special mental emotion in modifying the pulse. "About three years since, the jaundice attacked a man of letters in consequence of a violent attachment to a young lady, whose parents would not consent to their union. The patient's pulse was low, concentrated, thin, tense, unequal. A small eminence arose between the index and middle fingers, and its smallness and concentration increased at the time the melancholy was deepest, so that it was clear, from the presence of the organic character of the hepatic pulse, that the action of the disappointment or negative he had received had made a morbose impression upon the vitality of the liver."

You smile at the seeming pretension of this statement, but I would nevertheless advise you to refer to the works of such authors as Rucco; compare their opinions with your own observations, and I am mistaken if you do not find that there is much to be ascertained from certain changes of character in the pulse not susceptible of exact verbal description. Such conditions will aid you in judging of the vital energy in diseases the issue of which may depend more on constitutional peculiarities than in organic change. Independently of the lessened influence of posture, to which it has been one of the objects of this lecture to call your attention, let me repeat that, as a general rule, unnatural quickness of pulse sets in, often at a very early period, in phthisis, and increases

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with the progress of the disease ; that the earlier it is manifested the more, other things being equal, you would apprehend speedy aggravation, but that on the other hand a steady and gradual reduction of the frequency of the pulse would lead you to entertain hopes of important amendment, for under the influence of successful treatment the pulse loses its irritable character and becomes calmer, slower, and fuller. Whilst you would take care not rashly and hastily to pronounce a diagnosis from the state of the pulse alone, you will nevertheless rarely fail to derive considerable assistance from a sagacious regard to its condition.

LECTURE V.

Cod-liver oil ; Superiority to any other single remedy in phthisis ; Illustrative instances of its value ; Different kinds compared ; Collateral remedies sometimes useful, often unnecessary ; Effect of its introduction into the system by friction ; Mode of action ; Important practical generalizations derivable from a knowledge of its mode of action ; The appreciation and use of facts.

The great object, gentlemen, of all our researches is to attain to the successful treatment of disease. With this conviction I propose to devote the present lecture to the consideration of the effects of a remedy which you will have observed is very largely employed at this hospital, even to the extent of more than 600 gallons annually.

The records of the hospital give you an opportunity of comparing the effect of treatment conducted on general principles, irrespective of the use of this remedy, with treatment in which the administration of this medicine has occupied an important place ; and the more carefully you institute the comparison the more will you be convinced of the value of this substance in the treatment of phthisis, when appropriately administered, and combined with the use of such other measures as any special circumstances in the individual patient may require.

But you will like to see examples of its use. I first introduce M. A. F., a female aged thirty-two. The expansion of the two sides of her chest at the upper part is not perfectly equal, although a practised eye may be required to detect the difference ; in the left sub-clavicular region inspiration is interrupted ; in the right subclavicular region the expiratory murmur is prolonged. The disease is at a very early stage, and cod-liver oil has been given in the hope of improving her strength, and thus warding off further disease. Her progress is encouraging ; the pulse, in the last six weeks, having gone down from 116 to 80, and her weight increased five pounds.

The next patient, A. S., is a tailor, who has suffered much from confinement in close workshops. The principal physical signs at the time of his admission were, dulness on percussion and extensive moist crepitation over the upper half of the left chest. Softening of tubercular deposit was obviously proceeding rapidly, and this is the period in phthisis when the influence of remedies is usually least satisfactory. The patient looks very delicate. The pulse has remained about 100 for the last seven weeks, notwithstanding the administration of the cod-liver oil, and his general aspect is unpromising ; still some good effect has been produced, and there is an addition of five pounds to his weight.

The next patient, L. D., a young woman aged twenty-one, came into the hospital on the 31st of October, with moist crepitation at the apex of the right lung, and gurgling in respiration and cough on the left ; phthisis existing in the second stage on one side, and the third on the other. The pulse, as in the previous patient, remains as yet unaltered, but there is an improvement of strength, a subsidence of night perspirations, a regular state of bowels, which were previously relaxed, and, in the three months of her use of the oil, an increase of weight to the extent of six pounds. The local signs also indicate amendment. The expectoration is much diminished, and a dry, blowing respiration has taken the place of gurgling.

E. M., the patient now before you, under the judicious care of my colleague, Dr. Cursham, has acquired so ruddy a complexion that you would not suppose her an invalid. There is, however, cavernous respiration at the apex of one lung ; still, the cough is subdued ; the expectoration, once profuse, has ceased, and she has gained no less than fifteen pounds weight in about twelve weeks. It is right to mention that she has had spermaceti mixture and compound hemlock-pill for her cough ; and of late, in addition to cod-liver oil, the following mixture : Twenty-four grains of ammonio-citrate of iron ; two drachms of spirit of nutmeg ; six ounces of infusion of calumba : an ounce twice a day.

Here is another patient, S. G., aged twenty-five, who is fattening, and the catamenia, long interrupted, have returned—a circumstance of great significance and promise. You find a little cavernulous rhonchus only, where there was formerly extensive gurgling ; and a marked flattening in the subclavicular region indicates the process of contraction of a cavity. Her weight, which was seven stone thirteen pounds on her admission, in July, has steadily increased, and now, at the end of February, it is nine stone, two pounds, and the concurrent symptoms of vomiting, palpitation, and œdema, with which this patient was for a time harassed, have entirely disappeared. In addition to cod oil she has had syrup of iodide of iron, and counter-irritation has occasionally been established by the application of a liniment made according to the following prescription : Take of iodine, and of iodide of potassium, each an ounce ; of rectified spirit, two ounces : mix.

I must have the satisfaction of introducing one more patient, whose case is highly gratifying. This young woman, M. B., is, I am informed, the only remaining member of a large family, all of whom have died of phthisis. She was admitted five months since, with dull percussion at

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the right apex; at the left, gurgling in respiration, and cough. Her case was examined and recorded by two other medical gentlemen before I explored her chest, and my account corresponded with theirs as to the existence of cavity in the left side. To-day two of my colleagues have examined her, and agree with me in the opinion that no sign of cavity can now be detected in that situation. Let me describe the progress of her improvement: The extent of the gurgling gradually lessened, then dry cavernous respiration was the principal sign; this was superseded by blowing, and then bronchial breathing, and at present I detect nothing wrong except a little flattening of contour, slight dulness on percussion, and wavy inspiration. The catamenia have returned; the pulse has sunk from 112 to 80. Her weight five months since was seven stone twelve pounds and a quarter; we will try it again: it is now nine stone five pounds and a quarter.

You may wish to form an opinion regarding the comparative efficacy of the different kinds of cod-liver oil. In my early trials of the remedy, six years since, forty or fifty cases were treated with the coarse kind, resembling what is used in preparing leather, and the average benefit derived did not materially differ from that effected by the purest varieties subsequently employed. At a later period I had the curiosity to try these different kinds, combined with liquor potassæ, and peppermint oil, giving alternately the coarse and the purified cod oil, and recording the report of the patients; and it is a curious fact that the majority actually gave the preference to the mixtures in which the coarser oil was introduced. Objections have been made to this combination as complicating the treatment with the addition of a medicine by some persons supposed to be inappropriate; but my experience is favourable to the use of liquor potassæ, especially in the early stage of phthisis, and theoretical arguments might be advanced in its favour. In scrofulous affections, if Dr. Hughes Bennet be correct in his hypothesis, there is probably undue acidity of stomach, unfavourable to the solution of albuminous materials. The alkali of the salivary and pancreatic fluids, being neutralized, fails to convert the carbon into oil. The lungs not having enough carbon to excrete, local congestions arise; the blood is overcharged with albumen, and the albuminous exudation being deficient in fat, elementary molecules are not formed so as to constitute nuclei capable of development into cells, and tubercular corpuscles are the natural result.

Cod-liver oil probably tends to obviate the series of derangements just described, by combining with the albuminous element of chyme, so as to form the healthy chyle-granules which feed the blood, and, for the reason above named, is probably better introduced in scrofulous subjects when combined with an alkali. It is a curious fact, that when, about seventy-five years since, cod-liver oil was largely used at the Manchester Infirmary, chiefly in the treatment of rheumatism, the medicine was ordinarily given combined with alkali; Dr. Percival's favourite prescription being twelve minims of soap lixivium, an ounce of cod-liver oil, and half an ounce of peppermint water. The practice of administering a little lemon-juice afterwards would not necessarily interfere with the action of the alkali, and is worthy of incidental notice in connection with the recent valuable suggestions of Dr. G. O. Rees in the treatment of rheumatism with the acid of lemons. Occasionally, although not frequently, the stomach rebels against the oil, however purified, and in whatever combination; and I have been accustomed in consequence, under such circumstances, to introduce the oil endermically.

Three years since I was requested to see a gentleman from the country, confined to his bed, emaciated, hectic, and apparently failing rapidly, with a cavity at the apex of the right lung. There was considerable diarrhœa; and thinking the internal use of cod-oil unseasonable, I ordered an ounce, combined with oil of lavender, to be rubbed into the chest night and morning. This gentleman gradually rallied, and returned to the country, where he advanced much in strength and weight, and rode about on horseback. I examined him last year, and, judging from the physical signs, found the size of the cavity materially reduced.

J. S., a patient under my care for the last two years, with softened tubercle in the left lung, notwithstanding the adoption of a tonic regimen, and the internal administration of cod oil, got gradually worse, and in the four months preceding August, 1850, her weight was reduced from 105 to 97 pounds. I then prescribed, as a liniment, three ounces of cod oil; an ounce of sal volatile; half a drachm of oil of lavender; five grains of opium: half to be rubbed in night and morning. In a fortnight improvement commenced, and in two months her weight had risen to 104 pounds.

M. A. W., a patient lately in the hospital with cavernous respiration at the summits of both lungs, and who had weekly lost on an average a pound in weight for twelve weeks, rallied, gained a little weight during the first month of using the same liniment, and left the hospital somewhat improved. But I will not multiply examples. It is enough to say that satisfactory results have been sufficiently frequent to authorize the measure, sometimes as an auxiliary to the internal use of the oil, but more especially as a substitute when the stomach revolts at its internal administration.

I am indebted to Dr. Glover, of Newcastle, for a reference to some observations of Dr. Klencke, of Braunschwig, confirmatory of the results just described. In a memoir on the Therapeutical History of Cod Oil, Dr. Klencke says,—"I shaved some young dogs, and rubbed them with cod-liver oil twice daily for three weeks. At the end of this period they were in as good condition as dogs to whom oil had been internally administered; their bile was found as rich in fat, and their chyle equally charged with corpuscles without nuclei." Klencke adds that similar changes were observed in the bile and chyle of a cat bathed

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twice a day for some time in the same remedy, and that some oil was discovered in the urine of the animal, proving its free absorption by the skin.

You will naturally ask me whether there are any disadvantages incident to the use of so valuable a remedy? and you may repeat questions I have occasionally heard: Does it often produce diarrhœa? Does it tend to increase hæmoptysis? As respects the latter question, it might be sufficient to mention that the average frequency of the occurrence of hæmoptysis, as recorded by Louis and other observers, was fully as great in phthisical cases before cod-liver oil was introduced as it has proved in those cases statistically reported at this hospital in which this remedy has been perseveringly used. When hæmoptysis is active, as characterized by phenomena described in my second lecture, it is, indeed, easy to imagine that a remedy which increases the fulness of the pulse might aggravate the spitting of blood; under such circumstances the fish-oil should be discontinued, and the removal of blood by cupping may be desirable. When, however, as is frequently the case, the hæmorrhage is passive, means which tend to enrich the blood are calculated to lessen the hæmorrhagic tendency, and its occurrence is by no means an adequate reason for the suspension of the oil.

As respects diarrhœa, a malady which the reme-

Name.	Age.	Disease and Stage.	Date of Admission	Time of commencing the Oil.	Successive Weights.	Pulse. Before taking the Oil.	Pulse. At present	Bowels. Before taking the Oil	Bowels. At present.
					st. lbs.				
W. H.	34	Phthisis, 2	Nov. 11	Dec. 17.	Nov. 14 ... 9 7 „ 20 ... 9 5 Dec. 4 ... 9 2 „ 18 ... 9 1 Jan. 2 ... 9 2¼ „ 22 ... 9 6½ Feb. 5 ... 9 6¾ „ 14 ... 9 10	70	100	Confined.	Confined.
A. S.	37	Ditto, 2	Dec. 16.	Dec. 20.	Dec. 18 ... 6 11 Jan. 2 ... 6 13 „ 22 ... 7 1 Feb. 14 ... 7 2	100	100	Regular.	Regular.
D. H.	26	Ditto, 1	Feb. 4	Feb. 4.	Feb. 5 ...10 0¾ „ 14 ...10 1¼	...	100	Confined.	Confined.
T. C.	19	Doubtful.	Dec. 23	Dec. 28.	Jan. 2 ... 7 13 „ 22 ... 8 6¾ Feb. 6 ... 7 7¾ „ 14 ... 8 8¼	88	80	Regular.	Regular.
M A. F	32	Phthisis, 1	Dec. 23	Dec. 25.	Jan. 4 ... 7 3¾ „ 23 ... 7 4¾ Feb. 15 ... 7 8¼	116	80	Confined.	Confined.
M. B.	17	Ditto, 3	Sept. 16	Sept. 17.	Sept. 17 ... 7 12½ Oct. 21 ... 8 2½ Nov. 13 ... 8 7¾ „ 27 ... 8 10 Dec. 14 ... 8 12½ Jan. 4 ... 9 0 „ 23 ... 9 1¼ Feb. 15 ... 9 5¼	112	80		
S A. M.	16	Ditto, 3	Oct. 23.	Oct. 28.	Nov. 13 ... 5 4½ „ 27 ... 5 6¾ Dec. 14 ... 5 5½ Jan. 4 ... 5 4¼ „ 23 ... 5 5¾ Feb. 15 ... 5 8½	98	100	Relaxed.	Confined.
L. D.	21	Ditto, 3	Oct. 31	Oct. 31	Nov. 13 ... 7 7½ „ 27 ... 7 10 Dec. 14 ... 7 12¾ „ 23 ... 7 7¾ Feb. 15 ... 7 13	100	100	Relaxed.	Regular.

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dy under consideration has been supposed occasionally to aggravate, my own impression is that no such influence is evinced unless a state of erethism of the mucous membrane is present, in which case measures should be used to obviate such condition prior to the administration of the oil. Many of the patients take the oil unmixed, or, when such combinations are appropriate, floated on nitro-muriatic acid mixture, or on lemon-juice. The addition of creasote occasionally makes the stomach more tolerant of the remedy.

An ounce and a half of cod-liver oil, four drops of creasote, two drachms of compound tragacanth powder, and four ounces and a half of aniseed water, form a suitable mixture, of which an ounce may be taken thrice daily.

Those who take the oil unmixed, may cover the taste by eating dried orange peel, or by introducing a little dinner-salt into the mouth before and after the oil.

You will observe from the cases tabulated in the preceding page, all of which you have had an opportunity of seeing,—and the conclusion is in harmony with more extended observations,—that if the use of cod oil has any influence on the condition of the bowels, that influence is rather astringent than laxative.

I believe the fact to be that this medicine has no direct influence on the intestinal action, but that by improving the general health it tends indirectly to restore a natural condition of the bowels, whilst it expands the pulse, lessens the expectoration, moderates the night perspirations, and in many instances supersedes the necessity for the use of any other remedy.

You will say the evidence adduced of the powers of cod oil is strong, but that the remedy was formerly highly estimated and yet fell into disuse, and you may inquire whether it may not exhibit the fluctuations of fashion, and again sink into oblivion. The best way to secure for any remedy its proper place in therapeutics, is to determine its mode of action; and with this view I have from time to time endeavoured to obtain an analysis of the blood of patients who were in the course of improvement under its use: as an example, let me show you the analysis of the blood of a phthisical man in the Le Blanc ward, who had gained fourteen pounds weight in three months, and had essentially improved under the cod-oil treatment.

Dr. Snow did me the favour to make the analysis. I place by the side, for comparison, the analysis of the blood of a healthy male, as given by Becquerel and Rodier:—

Analysis of Blood of a Healthy Male.		Of a Phthisical man after three months' Treatment with Cod oil.
Water	779·0	770·6
Blood-globules	141·1	143·5
Fibrine	2·2	4·0
Albumen... 69·4		
Extractive and salts 6·8	76·2	81.5
Fatty matters...	1·6	0·4

The interest of these analyses is increased by their harmony with the observation of Simon, who recorded an increase of blood corpuscles and diminution of fibrine under the use of cod oil; and their importance becomes more obvious when they are viewed in reference to the facts stated by Andral and Gavarret, who, having analysed the blood in twenty-one cases of phthisis, found their maximum of fibrine, 5·9, their minimum 2·1, and that the amount of corpuscles approximated to the normal standard in only two instances, in which it was represented by 122·1 and 120·4. Frequently, indeed, the amount was below 100, and the decrease of corpuscles was almost always accompanied with a corresponding increase of fibrine. (Simon's "Animal Chemistry," vol. i., p. 281, Sydenham Soc. edit.)

You see that, in the patient just referred to, the proportion of blood corpuscles pretty closely corresponds with that characteristic of health, and Mr. Rodgers reports a similar result from the examination of the blood of some other patients to whom we have given the oil. As far as I am aware, however, chemical observations lead to the conclusion, that in phthisis deficient proportion of blood-corpuscles is the usual peculiarity. Struck with this circumstance, I took pains to collect, chiefly from Simon, analyses of the blood in different diseases, and I have placed before you averages of the proportion of blood-corpuscles and albumen in certain diseases, with a view to compare them with phthisis.

Average Proportion of some Constituents of Blood.

	Albumen.	Corpuscles.
In health	76	130
Pneumonia	80	122
Phthisis	100	78
Rheumatism	100	74
Diabetes	105	80
Chlorosis	72	56
Bright's disease...	103	50
Carcinoma	45	55
Erysipelas	—	100

You will observe that there are two diseases which present a peculiar similarity to phthisis, in their proportions of albumen and of corpuscles. These are rheumatism and diabetes. Now it is a remarkable fact, that rheumatism is the malady for the treatment of which cod-liver oil was first introduced into this country, and for which it has been so largely and successfully employed elsewhere. The variety of rheumatism in which it was most effectual is that in which the impoverished condition of blood is most likely to occur.

Dr. Percival, half a century since, (see Works Literary, Moral, and Medical, by Dr. Thomas Percival, vol. 4, p. 354,) observes,—"Men and women advanced in years, whose fibres may be supposed to have acquired a degree of rigidity, find surprising effects from it (cod-oil.) Some who have been cripples for many years, and not able to move from their seats, have after a few weeks' use of it been able to go with the assistance of a stick, and, by a longer continuance, have enjoyed the pleasing satisfaction of being restored to the natural use of their limbs, which for a long time

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before had been a burden to them. Two cases occurred lately in which the oil had an extraordinary effect, even on young persons, whose ages did not exceed ten years. Guaiacum, calomel, blisters, &c., were tried on both these patients, but with so little benefit that opiates were given merely to procure temporary relief. Their lower limbs seemed to be a burden to them, and they had such an appearance of distortion, that no hopes of relief could be well entertained. In compliance with the particular request of their parents, the cod-oil was given. The one obtained a perfect cure, the other nearly so; the latter having a little distortion in his back, is prevented the use of his legs So general (adds Dr. Percival) has been the use of the oil with us, that we dispense fifty or sixty gallons annually; and the good effects of it are so well known amongst the poorer sort, that it is particularly requested by them for almost every lameness. Except bark, opium, and mercury, I believe no medicine in the materia medica is likely to be of more service, and I should wish for a more general use of it in order to prove that the above account of its good effects is no exaggeration."

I am strongly impressed with the value of the remedy in diabetes. It is true that this disease involves an additional element, which it is not easy to suppose amenable to such a remedy as fish-oils, but the benefit derived in many respects is often remarkable.

In the month of April, 1848, a patient came under my care who had been affected with diabetes for some months, and had taken creasote and other medicines with little advantage. At the time I first saw her the quantity of urine passed in twenty-four hours, amounted to ten pints.

The following table will show the progress under the cod-liver oil treatment:—

Dates.	Remedies.	Urine.	
		Quantity.	Specific Gravity
1848.			
April 1	Cod-oil, two drachms three times a day.	Ten pints.	
„ 13	Ditto.	Six pints.	
„ 20	Ditto.	Four pints.	1·040
„ 27	Cod-oil, four times daily.	Six pints.	1·042
May 4	„ five times daily.	Three pints.	1·042
„ 11	Ditto.	Three pints.	1·037
„ 18	Ditto.	Two pints and quarter	1·020

Subsequently this patient passed unavoidably into other care, and owing to a misunderstanding, did not resume the cod-liver oil, which had been, from temporary causes, intermitted. She took a variety of remedies, including sulphur, hydrochloric acid, opium and alkalies. Drachm doses of carbonate of soda for a time acted favourably, but on the whole she retrograded. Her weight, which in June, 1848, was 107 pounds, had fallen, by December, 1849, to 88 pounds. Her appearance was haggard, and there was threatening of pulmonary disease. The cod-oil was resumed, and even then with temporary advantage, but she ultimately relapsed and sank.

The theory which I have now proposed in explanation of one mode of action of the oil is in harmony with the fact that its good effects are specially produced in women and children, for in them the relative proportion of corpuscles is stated by chemists to be small.

I may state that the remedy has afforded me most satisfactory results in neuralgia and sciatica, when associated with anæmia. Whenever arterial or venous murmurs indicate such a condition, a rapid improvement may be expected to follow the administration of the oil, even without the assistance of ferruginous medicines. In some disturbed manifestations of the nervous system which may appear more moral than physical, the presence of a weak, small pulse, has sometimes led me to give the oil, and with signal success. Do not think that I dwell on this subject from any love of fanciful hypothesis. When the light issuing from a certain number of facts seem to converge towards a particular point of explanation, it is useful to try the applicability of that explanation to analogous facts, and thus to entertain, I do not say to adopt, a theory—a sort of tentative theory, or "*prudens quæstio*." If the theory prove universally applicable, we obtain a law; if the explanation be found incorrect, it is yet seldom fruitless: indeed the proof of its inadequacy serves to narrow the field of inquiry, and to increase the probability that the next step may be in the right direction towards the attainment of truth. Time is sometimes lost in the laborious accumulation of miscellaneous facts. Numerism is productive only by the amount of "*lumen siccum*," intellectual intuition,—applied in the selection and appreciation of facts. There is an aristocracy in facts as well as races, and the mind should be taught to discern their prerogative dignity. "The naturalist who cannot or will not see that one fact is often worth a thousand, as including them all in itself, and that it first makes all the others facts—who has not the head to comprehend, the soul to reverence, a central experiment or observation, (what the Greeks would perhaps have called a protophænomenon,) will never receive an auspicious answer from the oracle of Nature."

To apply these observations to our immediate subject, let me remark that changes produced on the blood by diseases or remedies may fairly be placed amongst cardinal facts. It can scarcely be doubted, that if a professor accomplished in chemistry were officially connected with every hospital, such facts might be so collected as to render the discoveries of this important science available, in a remarkable degree, for the advancement of practical medicine.

Should further observation confirm what has been suggested in this lecture regarding the influence of fish oils on the composition of the circulating fluid, we shall discover more than the reason of their usefulness in phthisis; we shall show

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that they have no exclusive adaptation to that disease, but that they may be given with equal promise in various diseases associated with analogous conditions of the blood; and thus we may come to establish a therapeutical law so widely applicable as to simplify our principles, extend our resources, and consolidate our system of practical medicine. Such a generalization would commend itself to my mind by its freedom from complication and obscurity; for I am sure you will agree with me as to the evidence afforded in the noblest triumphs of philosophy, that although shallowness and obscurity are continually associated, yet that the ocean of truth is clear as well as deep, and that in proportion as we approach the truth, we shall attain to simplicity.

NOTES
FROM
A COURSE OF LECTURES
Delivered at St. Thomas's Hospital,
By GILBERT MACKMURDO, Esq., F.R.S.,
Surgeon to that Hospital,
and to the Royal London Ophthalmic Hospital.
(Reported by Mr. Howard Holland Mackmurdo, Assistant-Surgeon to the Royal London Ophthalmic Hospital.)

LECTURE XVII.

The Diseases of the Secreting and Excreting Lacrymal Organs and of the Conjunctiva Oculi. Remarks on the Existence of Entozoa in the Anterior Chamber of the Human Eye.

Gentlemen,—I have now concluded those of my lectures which related to the diseases of the eye itself, and this evening I pass on to the consideration of the affections to which the secreting and excreting lacrymal organs are subject, and likewise to some of the diseases of the conjunctiva which I have not yet described.

The lacrymal gland is said to be liable to acute inflammation, but I do not recollect a case clearly referable to such a condition, and our authorities on this point generally agree in speaking of it as being exceedingly rare; nevertheless, it has been described, and particularly by the late Mr. Todd, of Dublin, who stated that this gland was liable to both acute and chronic forms of inflammation, and that suppuration occasionally followed. He used to describe the chronic form as peculiar to strumous patients; he considered that children's scrofulous ophthalmia resulted from its morbid secretions, and he thought that under this state the glands became much enlarged and lobulated; and I have seen cases of this kind at the Ophthalmic Hospital occasionally.

Should a case present itself to your notice, appearing to be one of acute inflammation of the lacrymal gland, active measures should be resorted to by you at once. Venesection or leeches, with fomentations, &c., aperient and febrifuge medicines, should be ordered immediately; and if suppuration should seem inevitable, you would have to apply poultices, and to make an early opening under the upper eyelid, if possible, but otherwise through the lid transversely. The gland has in some cases become slowly enlarged, and this condition gives rise to the idea that it is affected with cancerous inflammation. The patient at first suffers with a burning heat, lancinating pain, and much lacrymation, without any apparent increase in the size of the gland; but this state does not last long, for soon you will see a prominence of the outer angle of the upper lid, and if you place your finger on it, you recognise a lobulated tumour. This will increase with various degrees of rapidity, and push the eye forwards, downwards, and inwards; vision is impaired, and very generally, but not always, is soon lost. As the tension increases, the pressure becomes greater, and it generally causes the eye to burst.

I mentioned, just now, that it did not always destroy vision soon, and I was then thinking of a patient whom I attended for a long time, suffering thus. His eye was lodged on the edge of the orbit, and near the cheek, but he still had some sight; and when he covered his sound eye, he could for many months distinguish objects correctly; but on uncovering the sound eye, he immediately had double vision. Gradually, his eye yielded, and the tumour then soon filled the orbit. He eventually sank. I did not recommend extirpation, because I considered the tumour malignant, and so it proved on examination.

You will find several cases recorded, in which an operation has been performed for the removal of the diseased gland. Some have proved fatal, others not; and I suspect that those cases which have recovered were not cases of malignant disease. However, Mr. Todd, of Dublin, published some cases which he considered true scirrhus of this gland wherein he had operated successfully; and several other surgeons have given to the world very interesting accounts of successful extirpation of the enlarged lacrymal gland, (see Travers, Lawrence, Mackenzie, Middlemore, &c.;) but the point at issue is, have they been true scirrhus or not; and who is to pretend to decide, when the patient has recovered? Mr. Travers, Mr. Lawrence, the late Mr. Tyrrell, and some others, have doubted their being so; whilst Dr. Mackenzie agrees with Mr. Todd in thinking that true scirrhus does sometimes affect this structure. I have seen only three or four of these operations, and in those instances the tumours have decidedly not been scirrhous. Dr. Mackenzie mentions the examination of the body of a girl, who had both lacrymal glands enlarged, and in her case the tumours were of a greenish colour; and also there were other similar ones attached to the *pars plana* of the ethmoid bone; and many others were attached to the dura mater; and that the bones were at these parts carious; also several small tumours existed within the skull of the child. He also mentions two or three similar cases, as having been described by Mr. Allen Burns, Dr. Belfour, and M. Dugard Fardel. The disease has been termed chloroma, or green tumour. I have mentioned it as being described by Dr. Mackenzie, but I have never seen any disease presenting these characters.

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If you determine to perform the operation of extirpation, you will have your difficulties increased in proportion as the tumour is large and adherent. The extent and direction of your incisions must vary with each case. If the upper lid can be raised at all, it is better to commence your incision at the outer angle of the eye, towards the temple, and then let another meet it at a right angle, so that you may raise the flap upwards over the forehead, and towards the mesial line, or you may be obliged to cut through the upper lid transversely. You are of course to endeavour to save the eye, if it has not been previously destroyed, and you will find a scalpel, bent on its sides, a very convenient knife for your purpose. Your index or little finger will greatly help you, as you can more safely introduce that behind the gland than the blade of your knife, and you can scratch away the adhesions. Mr. Tyrrell refers, in his work, to a case which I saw operated on, wherein a fatty tumour existed in front of the gland, and where the gland and tumour were rapidly and unnecessarily removed together; therefore it behoves us to be cautious in our diagnosis, as well as during our operation. Hydatid tumours also have been described as having existed in the lacrymal gland, and some authorities have spoken of them as occurring frequently; likewise encysted tumours are described; both of these would, if they became large, set up disease in the gland, and at any rate occasion a protrusion, and exercise pressure on the eye, and therefore extirpation has been recommended in such cases. If the tumour becomes vesicular, and you can decide as to its nature, you would naturally puncture it, and thus relieve the patient. It has been recommended that in such cases the wound should, for a given time, be kept open by the introduction of a piece of bougie; and a small encysted tumour of this nature is said once to have come away, in a poultice, entire, when a larger vesicular tumour had been punctured, and then poulticed; also we read of a case where a surgeon commenced his incision for the extirpation of a protruded eye, and that the point of his knife punctured one of these large cysts, which pushed the eye outwards, and the eye was found not to be larger than natural. Similar small encysted tumours have been occasionally seen in the vicinity of the glandulæ congregatæ and lacrymal ducts, and they should be opened, and partially or entirely removed. I have not seen any such. We sometimes meet with a "dry eye" in elderly persons, or in persons who have suffered from excessive grief, and who cannot cry. In the latter it is a purely nervous affection, but in the former it is supposed to result from an impaired state of the gland, and from a deficient nervous energy. Different sternutatories have been recommended as being useful in such cases, but I have not seen them of much use in these affections.

In another set of patients we witness the reverse of this condition, *i.e.*,—when the tears are secreted too freely; this is termed epiphora, and is very different from stillicidium, by which we mean to express that the tears cannot pass by their natural channels. Some slight blow, or the presence of any foreign body, or of some irritating fluid, will induce this condition. Children who have strumous ophthalmia, or who are teased with worms, are very liable to this condition. A little alterative and tonic medicine, nitrate of silver drops, vapour of laudanum, zinc eye-water, &c., are useful. Blisters are preferable to leeches in such cases. Occasionally accidental injuries have been inflicted on the lacrymal gland, which have left minute openings in their anterior surface, or these may arise after an abscess has occurred in connexion with the glands; in either case it is called a lacrymal fistula, and occasionally causes great inconvenience to the patient. They are sometimes treated by injection, with Anel's syringe, or by lunar caustic; and some cases are mentioned wherein a very fine needle has been heated and applied to the orifice, successfully. Sometimes the tears produce great irritation on the cheek; and a case of extraordinary cruelty is related in connexion with this condition: viz.—that a woman used to present her child to passers-by, to excite their pity, by observing its little cheeks deeply excoriated, nominally by the hot scalding tears; she was, however, detected in applying vitriol to the cheeks. And thus, also, I have had children brought to me as being very ill, and their mothers have asserted that their tears were all blood, whereas it was only a very slight discharge of blood from the lining membrane of the palpebræ. I have occasionally removed, with a fine probe, some small calcareous deposits from the orifices of the lacrymal ducts, but I believe this a rare situation for such concretions.

The caruncula lacrymalis suffers occasionally, in common with the contiguous parts, from inflammation or injury. The patient complains of excessive uneasiness, or even pain, and rubs the inner corner of his eye impatiently and roughly, and thus increases his own sufferings. If no accident or injury has occurred, you should treat it as you would simple ophthalmia. Sometimes it suppurates, and then the pus must be liberated, but the part will remain very sore for a considerable time, and the granulations will sometimes be exuberant; they should be touched with caustic: also the ciliæ which drop from the lids may fall into the lower punctum of the eyelid. I have never seen one in the upper punctum, but Dr. Monteath speaks of its having occurred under his notice twice. I have known several persons suffer from the more common accident (the former one). Every time the patient winks his eye, the end of the cilia pricks him; and unless the surgeon examines the patient very carefully, he is very likely to overlook the nature of the accident. The cilia is easily removed with a pair of forceps, and instant relief is thus afforded. I have also had to remove small polypus-looking excrescences from the caruncle; and this is easily done with a pair of curved scissors, or with a fine hook and a

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cataract-knife; some nitrate of silver should be lightly applied afterwards.

I mentioned just now that the caruncle remains enlarged sometimes after ophthalmia, without causing any uneasiness to the patient. This state has been called "encanthis benigna," in opposition to the "encanthis maligna," wherein the semi-lunar fold is involved, and rather large vessels are seen playing over its surface. This last form of the disease is very painful, and presents the character of scirrhus. I do not recollect seeing any case of a decidedly scirrhous character, which had commenced in the caruncle, although I have seen it as a secondary affection, after the upper or under eyelid had been suffering for some time. You are told by authors to remove this, by passing an armed curved needle through it, and, drawing the thread through, you are to draw it onwards, and then cut the tumour off. I do not recollect that I have seen this practised. One unfortunate effect of such removal would most likely occur, viz.—that the situation of the puncta lacrymalia would be altered, and that the tears would pass over the cheek.

From their situation you would expect that the lacrymal canals would every now and then be seriously damaged when the lids suffer from lacerated or incised wounds. Cases are, however, recorded of their healing kindly in several instances, and of their remaining pervious; but others have started the idea that there may be some other small channels leading to the lacrymal sac. I have seen several very unsatisfactory results after injuries to these canals, which would not lead me to entertain the idea I have referred to. I have seldom seen the sac itself injured, and the instances have been those wherein the bones of the face have been fractured, and the nasal duct and sac had participated in the injuries received.

The lacrymal sac itself suffers both from acute and chronic inflammation, but happily it is not a very common affection, although we very frequently see inflammation over the sac. This latter condition is much less important, if treated promptly and judiciously. The skin often has a livid or bluish hue on it, over an extended surface, from the nose outwards. Leeches and fomentations should be applied, and if matter forms, it should be let out at an early period, and then no mischief will ensue; but when the sac becomes inflamed, there is excessive pain resulting, from the boundaries of the sac being of an unyielding character, and from its own great vascularity. The pain is of a dull character, shooting up towards the eye and nose, and a swelling appears advancing forwards. This is acutely sensitive, and as the inflammation goes on, the pain, if unchecked, almost amounts to torture, and a racking headache is complained of. Sometimes the whole side of the face and temple becomes swollen. A serous effusion will take place in the under eyelids at the inner canthus. The canal has now become entirely obstructed by the inflammation, which has caused the lining membrane to swell. Very generally some feverish action will accompany the progress of this inflammation, and sometimes the patient becomes delirious. At first the nostril had been very moist; afterwards it had become, on the contrary, quite dry. This inflammation is generally of a phlegmonous rather than of an erysipelatous character; suppuration takes place, and the matter advances towards the surface, gradually destroying the superjacent parts. If the pus is not liberated by the surgeon, the soft parts gradually yield of themselves, and the pus finds its way out through an irregular and ugly opening near the tendon of the orbicularis muscle, and generally below it. The inflammation will now gradually subside, the discharge will become altered in character, and soon a merely mucous discharge passes out, and at length even this becomes more approximated in character to the tears themselves; in some cases the opening will spontaneously close. Severe and neglected colds are assigned as the most common causes of this inflammation; accidents may, of course, give rise to it, and I have known several instances of its having followed intoxication and a subsequent fight. If the inflammation has existed for some time before you see the patient, be very careful in giving your opinion as to the event; for many untoward circumstances may arise to baffle your endeavours to bring the case to a favourable termination. A strict antiphlogistic treatment must be pursued throughout the case. If it becomes necessary to open the sac, make a vertical opening with a cataract knife or a lancet, and enlarge the opening downwards, and then pass a probe through the canal into the sac, after which a bread-poultice may be applied; very frequently it is desirable after some interval to use a slightly astringent injection. If the patient objects to your making an opening into the sac, you must acquaint him with the probable result of his folly, and let him clearly understand that large sloughs sometimes form in such cases. In the chronic inflammation of the sac, the characters of inflammation are less marked; but there is still the swelling and the obstruction of the passage of the tears, and the patient is troubled with stillicidium lacrymarum—*i. e.*, he has constantly one or more tears dropping over his cheek, particularly if he looks at any object intently. He finds this takes place to a greater degree whenever he is exposed to damp air. He wipes his eye with his hand or his handkerchief, or presses on the sac gently from time to time, and thinks little of it; but after a time the tears cannot descend from the sac into the nose, and when he thus presses on the sac, the tears pass back again, and flow over his cheek; the discharge gradually loses the clearness of tears, and mucus is discharged, and then also a little pain is felt, and a slight blush generally appears over the sac; the nostril is uncomfortably dry, and the secretion cannot any longer be forced down into the nose. As spring and summer advance, some patients are temporarily relieved, and fancy they have recovered. Abscess, and a fistulous opening, and subsequent caries of

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the bone, will slowly follow each other in these cases, unless they are treated in time ; but I consider that caries would be very rare if the cases were not much neglected, or the patients predisposed to such a condition by excessive constitutional debility or venereal disease. Inflammation of the mucous membrane is the common cause of the mischief in all these cases.

I have not met with any case of congenital malformation of the nasal ducts. Chronic dacryocystitis, as it had been called, is very frequently associated with a cachectic condition of body. It is easily checked, and even got rid of ; but the patients will seek you again and again, on account of relapses, after they have desisted from employing the remedies which had relieved them, and each relapse is cured with greater difficulty, and occupies a longer period of time.

You may have to treat a fistulous opening in the sac ; in such a case the lining membrane has generally become much thickened, and the canal has been completely closed, or nearly so. Our treatment will naturally be antiphlogistic in the early stages of all such attacks, and leeches are found exceedingly useful ; they may be applied either over the sac or to the lining membrane of the nostril. During the existence of inflammation, fomentations, and poultices between folds of muslin, are useful ; afterwards different lotions, sedative or astringent, should be applied, or injected, such as I mentioned to you at the commencement of these lectures. Patients have found relief sometimes by the sneezing consequent on taking snuff, and by making forced expirations whilst the finger has been pressed on the sac to prevent any regurgitation ; and we read of nurses having cured infants thus affected by sucking their nose! Electricity has been recommended ; but I have no experience of any good having resulted from its application : in such cases I have often applied small blisters over the sac with much advantage, and also the tinctnre of iodine has appeared to aid us in the cure of these troublesome affections. You will recollect I spoke, this evening, before, of Anel's delicate syringe for injecting fluids into the sac through the puncta. This surgeon also invented some very fine probes for the clearing away any obstructions in the minute lacrymal canals and ducts. [Mr. Mackmurdo here exhibited the syringe and the punctum probes, and described the method of introducing them.] There is considerable difficulty and some danger in using these probes, as they bend so easily, and the mucous membrane may be wounded at the side of the canal. I have found them, when used in combination with injections, of use in some cases, but I think too much has been expected of them ; and neither the probes nor the syringe are used as frequently now as they were thirty years since ; solutions of nitrate of silver, sulphate of zinc or copper, or alum, or even mercury, have been at various times injected. Likewise, both abroad and in this country, injections have been thrown in from the nostril, and in other cases silver probes have been passed upwards from the nostril into the cavity. But this plan is not in the present day much approved of in this country. The late Mr. Morgan, and some continental surgeons, have occasionally practised it, and, as they considered, with advantage to their patients ; also it was for a long time the custom to open the lacrymal sac, and introduce a silver tube, which was allowed to remain in the canal. I show you now one of these tubes. The upper end, you observe, is cup-shaped, and it is intended to rest in the sac, and the lower end of the tube ought to pass clearly out of the canal into the nostril ; but sometimes these tubes have caused much inflammation, and in other instances they have sunk into the canal. It was expected that the secretion would pass through the tube, but it was found that it often passed on the outside of it. Before the tube was introduced, it was necessary to pass a probe into the canal downwards, backwards, and inwards, until it cleared the passage for the tube, which was then to be introduced into the duct, by means of this steel stilette, (which was now shown to the class,) bent at right angles with its handle. It was intended that the skin should heal over it, and so it did in some cases ; but long experience has shown that this is not so desirable a mode of proceeding as the introduction of the simple style with a head to it, which may be covered with flesh-coloured or black wax. We tie a piece of silk to the upper end, and after carefully introducing the instrument firmly into the sac, we fasten the threads on the forehead with a piece of court plaster, to prevent the style sinking too low ; or we sometimes make a hole in a piece of plaster, which is placed over the sac, and then the head of the style rests on the plaster ; but this is not quite so safe, though a more elegant mode of proceeding. Patients generally feel very little inconvenience from wearing these instruments. If the probe in its passing downwards has caused much pain and bleeding, the parts should be well syringed with tepid water, and the style should not be immediately introduced. We generally see the patient daily, and raise the style to liberate some of the matter and to cleanse the style, which is then to be replaced. The length of time that these styles should be worn, varies in every case, and it is occasionally necessary to re-introduce them after they have been for a time removed, but eventually a free passage is established, and a cure is effected. Some surgeons have preferred gold styles ; Beer used to introduce catgut, and fix one end, which was left very long, on the forehead, or under the cap of a female, and the lower end he fixed by a piece of plaster to the side of the nose. He drew a little of it down daily, and cut off the superabundant lower portion. He also gradually used a thicker piece of catgut. The style was introduced by the late Mr. Ware, and is a decided improvement on all these plans. Mr. Lawrence used to recommend the introduction of the small end of a bougie at first, and he syringed the parts occasionally, and then, after a few days, he introduced the style. Occasionally patients apply to us in

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great fear, because the style they have worn has disappeared. If they do not suffer any inconvenience it would be absurd to attempt to remove it, but I have known a few cases wherein very severe irritation has resulted from such an accident, and I have had, once or twice, some difficulty in removing the styles, but the patients have eventually recovered without any fistulous openings. We often meet with chronic inflammation of the sac, and particularly in scrofulous children, and the integuments are then frequently ulcerated: constitutional treatment will do more for them than any operation.

Fistula lacrymalis is a term often used very carelessly for any obstruction in the lacrymal sac or ducts, whereas, of course, it can only be properly used when there is a false opening communicating with these cavities, and such condition usually results from neglected inflammations. They may exist singly or in numbers; if there are three or four slight superficial ones, you should divide the parts freely and clearly into the sac; then examine with your probe the state of the nasal duct. I have now and then seen them deeply situated, and the maxillary bone has been carious. You must then treat the part as you would every other bone in such a state. I have heard of cases of fistulous openings, the result of the wearing of styles, having been cured by an autoplastic operation—*i. e.*, by the substitution of skin from another part of the cheek, but I never found such a proceeding necessary; sometimes I have had to apply a fine pencil of lunar caustic to the orifice two or three times, and I have ultimately succeeded in effecting a closure of the part. Beer used to describe a hernia of the lacrymal sac, by which he meant a displacement of it; others have styled it a relaxation of the sac. The patient does not complain of any pain, but you may observe a swelling in that situation, varying in size, which can be easily emptied by pressure, generally into the nose, but occasionally upwards into the puncta, and then the tumour presents a wrinkled and loose appearance until it is again filled, which soon occurs. This has to be repeated frequently, and the patient soon becomes accustomed to do it. A great many plans have been proposed for emptying mechanically the sac when thus affected; others have applied stimulating applications of various kinds. I have found, in a very similar condition, small blisters and tincture of iodine useful in this affection, which differs in some respect from what is called generally mucocele, but which also results from obstruction in the lacrymal and nasal ducts. The tumour enlarges gradually, and it is frequently discoloured; it may be either hard or soft; generally it is the former, and you cannot empty it by pressure. In such cases, you should open the tumour with a lancet or cataract-knife, taking care not to divide the tendon of the orbicularis muscle. The syringe should then be freely used, and the canals treated as in other cases. We sometimes meet with a relaxed and fistulous condition of the lacrymal canals, causing stillicidium lacrymarum.

Astringent applications, with tonic medicines, seem to effect a cure in some of these cases, whilst in others they baffle our best endeavours. It has been said that this condition has resulted sometimes from the injudicious use of probes, &c., for the cure of chronic affections of these parts. I have only seen a few cases of congenital obstruction of the lacrymal canals. One lady applied to me, begging me to use Anel's probes for her; I tried several times, but in vain, and when I told her I feared there was some congenital defect, she informed me that she had been under Mr. Hodgson, of Birmingham, and Mr. Guthrie and many others here, but all in vain. (She said she had always had the watery eye, but that she thought if she had told me these facts I should have declined making the attempt.) I know of no remedy for such a condition of parts. I have sometimes found the puncta exceedingly contracted, and when my probe had been delicately advanced a little way it proceeded farther with tolerable facility. It is not a very uncommon circumstance to meet with small calcareous deposits in the lacrymal passages. I have removed them from the puncta, which they were obstructing, and also from the folds of the conjunctiva. Some curious cases have been recorded of similar deposits having been found in the nasal duct and lacrymal sac. Walther relates a case of a polypus existing in this situation, which obstructed the nasal duct. He drew it out with a pair of forceps, and then cut it away at its pedicle, and the patient recovered perfectly. Patients suffer occasionally from a dryness of the conjunctiva, which ceases to secrete, and the eye itself then looks dry and rough and of a dingy colour. I have seen this condition baffle all a surgeon's endeavours, and the eyelids have gradually become adherent to the eye; but these cases had existed for a considerable time. Others have appeared to be benefited slightly by treatment. This is said to be a somewhat different condition from the cuticular appearance which the conjunctiva assumes sometimes, and which appears to result from exposure, as from ectropium, or from irritation by entropium; but when we have applied to some patients thus affected unctuous but yet fluid applications, they have seemed better temporarily, as also after weeping, but we know of no cure for it; happily it is a rare affection.

There is a diseased condition of the conjunctiva called pterygium, from the semblance to a wing in shape; it is a thickened state of the membrane, presenting different appearances in different patients. It is triangular, and generally it exists on the nasal side of the cornea, though occasionally we see it also at the temporal, and now and then I have seen it pass from above downwards. The apex usually, but not always, is pointed towards the cornea, and it even advances over it sometimes, nearly to the middle; when it is very thick, the deeper part seems to be connected with the tunica albuginea. We usually speak of two forms of it—"pterygium crassum," and "pterygium tenue." The former is thick and fleshy in its appearance,

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and has been likened to a delicate muscle, and the latter is nearly transparent, and appears membranous, with a few scattered vessels running along it. No pain accompanies the formation of this disease, and in most cases we can easily raise it from the eyeball if the person directs his eye towards the side on which it ends. We see the disease frequently at our ophthalmic hospital, and in a very large majority of instances it occurs in sailors; also in any person who has been to the West or East Indies; therefore we may suppose that the chronic ophthalmia induced by exposure to the great heat of China, has some influence in exciting this disease of the conjunctiva. It is of very rare occurrence in young persons, and I have never seen it in children. If the growth is allowed to proceed unchecked, the cornea will gradually be covered and irreparably injured, for after the disease has existed in connexion with that tissue for some time, you will not be able to restore its perfect transparency by operations. Happily, however, this happens rarely and advances more steadily. Patients in general are very unwilling to submit to the removal of pterygia, because they do not suffer pain, and because they are not for a considerable time aware of the probable interference with vision. You may use for the membranous ones astringent lotions, but you will seldom effect much permanent good, and you will be obliged to resort to the knife at last. Nitrate of silver drops, liquor plumbi in drops, and vinum opii, may be used in succession, or as a change.

If the patient will allow you to operate, the thin membranous pterygium may be raised by your forceps without giving any pain to the patient, and you may snip a small piece off with a pair of scissors, just where it would pass over the cornea, and then you may, with the scissors, or a very narrow knife, detach the membrane from the globe towards the base of its attachment; afterwards, you should use some astringent lotion, as alum, or lead, or copper. The fleshy pterygium may be removed in a similar manner, but the narrow knife or the cataract-knife is better than scissors, and you must calculate on a little hæmorrhage. You should never cut the portion of the pterygium which may be over the cornea, for it will of itself disappear, and if you attempted to separate it, you would be sure to do mischief. Connected with these I have seen little tumours looking like fat under the conjunctiva, and situated near the sclerotic; sometimes they are over the cornea, and I have been asked to remove them; this is very easily done with a cataract-knife by avoiding the reflected mucous membrane, and detaching the body with the forceps and scissors. I have seldom seen real warts growing from the conjuncta oculi, although they are described as occurring frequently; when they do form, they are often very numerous; they have been said to have been seen in the epithelial layers over the conjunctiva, but I have not observed any there; they should of course be removed at once, and astringent lotions should be applied.

I had a case under my care a very little time since, of what would be generally termed a fungous tumour of the conjunctiva. This proceeded from the inner side of the globe; and for some time I entertained fears as to the result; but as there was not severe pain then, or resulting after pressure, I removed it, and I used nitrate of silver to the cut surface, which generally healed, and the patient is now well, and I do not believe that it was really a malignant disease. I do not recollect having seen any tumours like those which are said to come from the cornea and sclerotic, and which have hairs on their outer surface; but vesicular and adipose tumours are continually met with between the conjunctiva and sclerotic, and are easily removed; and in scrofulous individuals we frequently meet with tubercles arising from their sclerotics, which are usually of a yellowish blue tint; they are of slow growth, and sometimes they disappear under treatment, whilst in other instances they suppurate. Occasionally hydatids have been detected in the cellular tissue of the palpebræ, called the cysticercus cellulosæ, and also several cases are on record of the extraction of these animals from the anterior chamber, by Newman, Dr. W. Soemmering, and Mr. Logan, of New Lanark. They have been also found in the eyes of patients at the London Ophthalmic Hospital, both under the lids and in the anterior chambers, and have been removed. Those which have been in the anterior chamber have given rise, in different cases, to considerable inflammation, and in some cases to destruction of the organ. Mr. Lawrence in his treatise on Diseases of the Eye, which, although published several years since, has always maintained the high character which the name of this surgeon would at once give to any work proceeding from his pen, has referred to the frequent existence of filaria in the anterior chamber of horses' eyes, in the East Indies, and also he quotes Dr. Newman and other celebrated surgeons' researches on this subject. They have often found filaria in the human eye, and in many of the lower animals; and in later years several notices of the existence of these animals in the human eye have been inserted in our different medical journals.

Medical Men Writing in Political Papers on Professional Subjects.—M. Pelletau, physician to the Bicêtre Hospital at Paris, (a lunatic asylum for men,) has just been suspended for one month by the superintending committee, for having sent to *La Presse*, a daily journal published at Paris, a letter wherein he stated that the cholera had again broken out at Bicêtre, and that twenty cases had been reported in three days. This letter was placed where semi-advertisements generally appear, and was written with an evident desire to call public attention upon its author. It is a pity that such means should be ever resorted to; political papers are not the field where professional subjects should be discussed; the public have ever erroneous notions of medical topics, and we gain very little in thrusting our affairs before them. As to cholera, it is, to say the least of it, imprudent to alarm the public mind, and such announcements should always be made with extreme caution.

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CLINICAL LECTURES

Delivered at St. George's Hospital,

By CÆSAR HAWKINS, Esq.,

SURGEON TO THE HOSPITAL,
AND VICE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

1. *Acute synovitis of knee and abscess, from needle.*—2. *Crepitating synovitis of knee.*—3. *Gonorrheal synovitis of joints, and ophthalmia.* 4. *Rheumatic synovitis; Ulceration of cartilages; Extension by screw.*—*Synovitis with scrofula.*—6. *Scrofulous abscess of knee; cure.*—7. *Disease of knee; amputation.*—8 & 9. *Chronic inflammation of ligaments of the knee.* 10. *Hysterical pain of knee.*

In making clinical instruction auxiliary to, and yet different from, your systematic courses of lectures, it is sometimes useful to bring under your notice several examples of the same disease for comparison with one another, that you may see how the disease is modified by constitution or other circumstances; at other times it is instructive to group together a variety of different diseases of the same region or texture; and accordingly, as there happen to be very many joint cases under my care at the present time, I propose to pass under review a number of cases in which the knee-joint is affected, in different ways and from various causes.

1. First, let us take the case of Thomas A—, a boy aged fourteen, who was admitted a month ago (Feb. 5), who tells us that about Christmas he ran a needle into the knee, just above the patella, on the inside, where a mark is pointed out as the situation of its entrance, and he asserts that the needle still remains in the joint, but it cannot be felt. On his admission the synovial membrane was greatly swelled with fluid, bulging irregularly in various directions, with redness of the skin in several places, giving it the shape which medullary disease not unfrequently assumes; the joint was also painful and tender, and the boy was emaciated, with an anxious expression of countenance; he had a quick and weak pulse, and a dry and glazed tongue, but no shivering or perspiration.

He told us that the joint began to swell and to become painful very soon after the puncture, and in fact the part appeared to be affected with acute inflammation, probably containing pus, and making the loss of the limb not at all unlikely.

You may remember, however, that a week's rest, with cold lotion and a purgative or two, with light nourishing diet, lessened the acuteness of the symptoms, and on the 15th our notes remark that "the pain and tenderness were less, though the swelling was not less," and in order to lessen the tension and acquire more information for future treatment, I introduced a grooved needle into the joint, and let out about two ounces of semi-opaque liquid, consisting of synovia with some pus, very visible under the microscope, but less distinct to the naked eye.

This proceeding is often useful where a joint is very tense with acute inflammation, and very safe if you take care to admit no air. If, in such a doubtful case as this boy's, you find that the fluid is almost entirely pus, it is then advisable to open the cavity freely, and by doing it thus early you prevent the serious mischief of the ulceration of the synovial membrane at its thinnest part, and the extension of the pus in the loose cellular tissue under the vasti muscles, in affections of the knee-joint. If, on the other hand, you find the proportion of pus to the synovia is not very great, you need not open the joint further, but you lessen the severity of the disease by removing the tension and pain, and are better able to subdue the inflammation by blisters, which are not borne in such a state of tension as this boy's joint was in before the puncture. I remember one case of inflammation of the elbow-joint which I punctured in this way twice or three times, the proportion of pus being above a third of the fluid let out, in which the ligaments were so softened as to let the bones bend about twice as much as usual, and yet the joint was perfectly restored to a sound state. I would confine this measure, however, to cases of suppuration from the synovial membrane, without ulceration of cartilages; if suppuration ensues when the cartilage is destroyed, the case must end, as an abscess does, by almost inevitable anchylosis, after the pus has been evacuated.

Two days after the puncture, the note says:—Less redness; little tenderness; no pain; and accordingly, on the 17th, I began the use of blisters, with which we must endeavour, if possible, to effect a cure; a second was applied, on the 28th, over the joint itself, the first being put on the thigh, just above the reflection of the synovial membrane, because it occasionally happens, in an acute case, that the disease is aggravated when it is applied too close to the cavity. You may now see a little diminution of the fluid, and the boy's health enables him to bear a little quina, with meat diet.

[The progress of this case was subsequently somewhat variable, and more than once threatened suppuration of the joint; then the synovial membrane got healthy, but great thickening took place, for some way up the limb, around the bone; finally a small abscess formed on the inside, below the skin, which was punctured, and about a third of a *needle* was extracted, having in its eye full *two inches of thread*, which had thus been above five months lost in the joint. The boy says the rest of the needle still remains; but however that may be, the joint appears now (July) nearly well, with increasing power of motion.]

2. The next case is that of Emma D—, aged seventeen, who was admitted on the same day, Feb. 5th, having a peculiar form of inflammation of the synovial membrane, in which there is a crepitation in pressing the joint. I have only seen this, in a marked degree, in persons who, like this girl, are very nervous and hysterical, and complain of much pain about the joint, which is, however, not often much swelled from fluid; and

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not unfrequently there is a similar crepitating fluid, as you see in this case, in the bursa below the ligamentum patellæ; and I presume that it arises from an unusual thickness of the synovial secretion. It is not a disease of importance, but will often give you some trouble before all the inflammation and pain go away. This girl was re-admitted, after she had only left the hospital a week, having had blisters applied in the three weeks she was previously under treatment. These had so far lessened the disease that I only applied a bandage about the knee, constantly wetted with hydrochlorate-of-ammonia lotion; and under this means, with the use of bark, the effusion has been absorbed and the disease cured. Steel, and other remedies of this kind, are often necessary; and I may remark, that you must distinguish the crepitating synovia of these cases from the sensation of loose masses of lymph often found in bursæ, and occasionally in joints; and also from the noise produced by motion in joints in which some adhesions have formed, or in which the cartilage has become uneven and rough, when crepitation is sometimes very considerable.

3. Our next case is that of William L—, thirty-five years of age, admitted January 8th, with inflammation of the synovial membrane of both ankle-joints, and of the left knee-joint. It appears that about a fortnight before his admission he contracted gonorrhœa; that about five days ago his left foot became swollen, painful, and red; that he took a large dose of aperient medicine with relief, but in the evening of the 5th his right hand and left knee became also inflamed. There was, on his admission, a good deal of purulent discharge from the urethra, and he also complained of sharp, shooting pains in both eyes, and there was a fluid discharge from them similar to that from the urethra. Our notes inform us further, that three years ago he had gonorrhœa, followed by rheumatic affection of his joints, which lasted four months, and that he has occasionally had some pain in his joints since that time.

Here, then, you have an example of a constitutional affection, gonorrhœal rheumatism, in which several joints are at once or successively attacked, as the consequence of infection in the form of gonorrhœa, for a clear knowledge of which remarkable peculiarity of system we are indebted to Sir Benjamin Brodie, to whose work on the joints I must refer you for the details. You see that a few days after the infection his joints have become affected, and a few days after this his eyes: sometimes the eyes become inflamed first, and the joints afterwards; and you may see also a similar series of attacks when the urethra is inflamed from stricture without positive gonorrhœa. You see, moreover, from the history I have read to you, that he has suffered in the same way on a former occasion, and as the instances in which gonorrhœa produces such distressing effects are rare, it is obvious that the disease must depend on some peculiarity of the constitution, which in fact is so very strongly marked, that individuals who once exhibit it are very likely to have similar consequences whenever they contract gonorrhœa; and what is of great importance to them, this state of system is such as to make it very difficult to cure it, and frequently you will be annoyed by one or more relapses when you hope you have subdued the attack.

Why the eyes should also suffer, it is not very easy to understand, for you must not suppose that it is by contact of the gonorrhœal matter; there is indeed, as you are aware, a purulent ophthalmia from this cause, which may destroy the eye by ulceration and sloughing of the cornea in forty-eight hours, if unchecked: so also there is an affection of the eye in rheumatism; but ordinary rheumatic ophthalmia is an inflammation of the fibrous tissues, the sclerotic and iris; gonorrhœal rheumatic ophthalmia, on the contrary, is a simple inflammation of the conjunctiva, generally of a mild character, though sometimes attended, as in this patient, with moderately purulent discharge; very simple local treatment is sufficient, with such general remedies as the more severe synovial affection requires. To trace this symptom, in our case, I may read to you that on the 10th, two days after his admission, there was no inflammation of the eyes. On the 27th it is stated that he had "some return of inflammation in both eyes, particularly the right; the pupils are much contracted, and the conjunctivæ congested." On the 29th, "there are several small pustules over the cornea and conjunctivæ in both eyes, and he cannot bear the light." Feb. 2nd—"Both eyes are better, particularly the left;" and on the 7th, "the eyes are nearly well." Fomentation in the acute stage, and Goulard lotion afterwards, were sufficient, and he has not experienced any third attack.

Now as to the constitutional treatment of the whole case:—On his admission, on Jan. 8th, a purgative of calomel and colchicum, with Dover's powder, was given to him, followed by a senna draught; and when I saw him on the 10th, I ordered a saline draught, with fifteen minims of wine of colchicum, and half a drachm of salts, every six hours, to which I should have added some opiate, if the pain had been as acute as it sometimes is in these cases. On the 11th, the notes say "the swelling of the right knee and ankles has greatly abated, and he has little pain." On the 18th "rather more pain in the left limb," and I ordered a vapour-bath, which however will not do when the pains are very severe. On the 22nd, the amendment not being rapid, I omitted his mixture, and gave him a pill containing two grains of calomel, one of extract of colchicum, and a quarter of a grain of opium, night and morning, which gave a fresh start to his cure; and, on the 24th, the note says "less pain, but the knee is still much swollen." On the 27th, his gums being affected, the pill was given once a day only. On Feb. 7th, although improving, the quantity of synovia in the knee was still considerable, and I began the application of blisters.

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On the 12th I gave him bark, iodide of potassium, and carbonate of potash, which is often useful in the chronic stage of this disease, and left off the pill. On the 21st, however, after having nearly got well, there was a return of pain and swelling in the knee, and a little also in the ankles, and I returned to his calomel pill once a day, continuing the last mixture, and repeated the blister to the knee. At present you see him slowly mending, but in his weak state of constitution I dare say his convalescence will be slow. [After this, local vapour-baths were used, with much advantage, and he left the hospital on April 2nd, nearly well.]

4. Our next case explains the consequences of ordinary rheumatic fever, for which the patient, Ellen G ——, aged thirty-one, was admitted under Dr. Nairne, on the 11th of December, under whose care the foot, which was also affected, has got well; but I was asked to see her about the middle of January, on account of her left knee. At that time she was weak and pale, and exhausted with pain, which was still severe, and was worse and attended with starting in the night time; she still had some fever, and lay entirely on her left side, with the knee exceedingly bent, and the least attempt to put her into a better position gave her the most excruciating suffering. There was a good deal of swelling, involving all the textures around the joint and lower part of the thigh, without synovial swelling, some parts being more puffy than others, and any pressure of the patella or tibia against the femur gave great pain. In short, the rheumatism had terminated in ulceration of the cartilages of the joint, which was making such progress as to threaten suppuration, but not yet without a chance of its being stopped, and the limb preserved, although necessarily with anchylosis.

She was taking morphia, on account of the nocturnal pain, and some small doses of calomel were given, night and morning, which is of great use in this affection; five or six leeches were applied to the joint about four times, at intervals of two or three days, which considerably lessened the pain; and on the 27th she was sufficiently relieved to allow of the application of a small blister, which has been repeatedly applied to different parts of the joint, the effect of which I prefer, on the whole, in rheumatic ulceration of the cartilages, to the more energetic remedy—the application of caustic issues, so useful in idiopathic ulceration.

Under these measures considerable progress has been made, and she is now taking better diet, with sarsaparilla and iodide of potassium, but it was not possible, for the first three weeks, to make even cautious attempts to straighten the distorted joint, which you may see still much bent, and the tibia drawn backwards towards the ham, while the patella and femur are proportionately prominent in front. In bad cases there is complete consecutive dislocation into the ham, which is prevented if you can in the first instance keep the limb on a straight ham-splint In her present state, then, there is great improvement in health and diminution of suffering, and the local disease is so much better as to leave little doubt of recovery; but, as I told you that a stiff anchylosed joint is almost inevitable after so much ulceration, what will be her future state? Now, this depends upon what she can bear done by an angular splint with a screw, which I ordered a few days ago, with a soft cap over the knee, by which it can be fixed to the angle of the splint, while the screw acts on its two portions. It will require very gradual and cautious use, as the disease would easily be reproduced; but with caution you can effect a great deal in such cases, before perfect anchylosis is established, and often get the limb to a much more favourable position for walking. [In fact, although the tibia remained permanently somewhat out of the proper line, the knee was got quite straight, and she was walking about with crutches when she left the hospital early in May.]

5. We will next proceed to a different class of affections of the knee-joint, which are very common. First, let me take the case of Charles B—, aged fourteen, admitted Feb. 5th, who tells us that in getting off a cart, about six months ago, he strained his knee, which soon swelled, and that he has continued to work up to the present time, though with some pain. The joint has been getting larger lately; there is some thickening all round it, with some fluid in the synovial membrane, and his general health seems good.

In this boy you see the consequence of a slight injury, which has been kept up by use, and probably would not have been of any consequence but for a tendency to scrofulous disease; it seemed a mixture of strumous disease of the tibia, with moderate inflammation of the lining membrane. What has been done for him was first to put on a ham-splint, after enveloping the joint in mercurial plaster to keep it quiet, with pressure around it; and on the 17th, all synovial puffiness having gone, the joint was bandaged up and starched inflexibly. He has also taken some iodide of iron three times a day, and under this treatment you may have seen, when the bandage was taken off on March 3d, that the joint is quite free from pain and swelling, and he leaves us to-morrow; but as it has been allowed to go on for six months, I have advised him to continue his gummed bandage for about six weeks longer.

6. In this case you have an early stage of strumous disease, perfectly curable with a little prudence. Our next case, that of Ellen L—, aged ten, admitted on the same day (Feb. 5th), presents us with a much more advanced stage of the same affection, not yet, however, incurable, though it has now lasted seven years, at which time her right knee became affected from a fall down stairs. The joint is swollen so as to measure two inches more than the other knee, the swelling being partly synovial; this being thickened and elastic, though it probably contains no

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fluid, but the increase of size chiefly arising from infiltration and organization of lymph in the soft parts all round the ends of the tibia and femur. The joint is very much bent, without dislocation, and much pain is produced by attempting to straighten it, but yet there is motion enough to show that there is no anchylosis. There has formerly been suppuration, and the cicatrix of the abscess adheres to the inner condyle, but there has been no exfoliation.

In this case there has been strumous abscess connected with the femur, and very probably deposit of cheesy matter in the tibia also, and there has been ulceration of the cartilages, with soft union between the surfaces of the bones, probably of all three, which form the joint. There is also a useless condition of the knee from its bent position; but, fortunately, strumous disease, even of this length of time, seldom causes bony anchylosis, which very soon takes place in such cases as G——'s rheumatic ulceration; and you can therefore, when the joint is quiet, effect a great deal by means of an angular screw-splint in the ham, which we are using also on G——. I first applied, however, a pair of leather side-splints, to remove entirely all swelling and pain from inflammation, which object you have seen effected; and now you may watch the action of the screw-splint. The girl's health is apparently now tolerably good.

[By the use of the screw the joint was made perfectly straight in little more than a fortnight; and the child left the hospital at the end of March, with orders to wear some straight leather side-splints and a bandage for a long while.]

7. The ultimate consequences of disease of the knee-joint have been shown you in John H——, thirty years of age, whose limb I have been obliged to amputate, and who is going to leave the hospital this week. His disease was probably inflammation of the synovial membrane, followed by ulceration of the cartilages and necrosis of the tibia, in consequence of a strumous constitution, but it may have been originally serofulous disease of the tibia spreading secondarily to the joint.

This man told us that his knee began to swell six months ago, but was cured by blisters, till three months ago, when it again swelled, but was second time made much better, till three days before his admission, when swelling returned. He was, throughout most of this time, had startings at night and a good deal of pain, and very early in the case an abscess formed below the outer part of the joint, which has never healed. On his admission on the 11th of December last, there was a small opening below the head of the tibia, on the outside, into which the probe passed to some depth, from which there was a watery discharge; there was a good deal of thickening all round the joint, and some fluid within it, which I thought was an abscess, prominent chiefly on the inside of the femur, but communicating probably with the external opening by a narrow sinus; and the man was so weak and emaciated that I told you I could not expect to cure the disease.

You may remember, however, how much relief was at first obtained by rest, by good living, and by saline and opium, followed by calumba and ammonia, and then by quinine; he lost the pain and starting in great measure, and the fluid lessened considerably. In three weeks' time, however, a bad cough came on, with perspirations, and some return of pain in the joint, with evidence of suppurative inflammation within it, afforded by enlargements of the superficial veins of the inner part of the thigh.

At this time, Dec. 30th, I put him under the physician's care for his cough, whose opinion was against the probable existence of tubercles, and on January 23rd, I amputated the limb, at which time the original swelling on the inside had reappeared, and a large separate abscess formed on the outside of the thigh towards the ham. You may remember, that on examination, matter was found in the joint: besides a large foul abscess in the thigh, communicating with it by a small opening, it was found that the original sinus led to a portion of dead bone, the upper end of which was seen in the head of the tibia within the joint, the cartilages of all these bones being in great measure absorbed by ulceration. It is not my intention to notice anything further in this man's case, who is now well; but it is a good example of the effects which may follow disease of this joint, let its origin have been whatever it may; and only amputation can preserve life in such a stage as this, when every texture of the joint is at once affected.

8. In such cases as the two next, it is sometimes difficult to decide in which texture the disease originated, but probably in great measure in the ligamentous tissue around the joint; and such cases as these are sometimes very tedious, and not easily cured, from their tendency to relapse as soon as the patients are allowed to get up and use the joints.

The first of these is Frances H——, aged thirty-one, admitted on the 8th of January: she is a housemaid, and is obliged to kneel much, but there is no evidence of her having had the usual bursal swelling from this cause. She has suffered from pain and swelling of the knee during the last nine months, and has had leeches and blisters applied before she came into the hospital, at which time there was slight general fulness of the parts around the joint, which was tender and painful, but there was no synovial swelling.

Being a nervous person, I first wrapped the joint up in belladonna plaster on leather, with a bandage over it, and gave her steel, and aloes and myrrh pill; but finding that there was distinctly the pain of disease, and not hysterical pain only, I applied a blister on the 20th, and have repeated it three times since that time, under the use of which the joint has much improved, but a little pain and swelling still remain.

After this, the joint was enclosed in leather straps, with mercurial plaster and a bandage, and the patient left, apparently cured, at the end of March.

9. You may see the same affection, in a rather more aggravated form, in the case of Thomas

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D——, thirty-seven years of age, admitted on the 8th of January, the same day as the last patient; and in him, also, the disease began about nine months previously, and had, as in her, been prevented from getting well by his continuing to follow his employment. In this circumstance, we see one of the greatest disadvantages which those of all classes labour under who depend on their daily exertions; and it is not wonderful that, when neglected, such cases as these two may sometimes be seen to terminate, notwithstanding their present chronic condition, in ulceration of the cartilages and a succession of small abscesses, and, finally, in the loss of the limb.

It appeared, from his account, that nine months ago pain came on in his knee without any apparent cause, followed in about a fortnight by some swelling; that a blister on each side of the joint relieved the pain, but the swelling continued; that two months ago he came here as an out-patient, and that some more blisters had reduced the swelling and lessened the pain; but that all this time he had continued to go about as a carman.

On his admission there was a good deal of pain, increased by using the joint, and there was puffy swelling and hardness round the joint, with considerable stiffness; but there was no synovial enlargement, and none of the starting of diseased cartilages. He has therefore had a succession of several blisters to his knee, and our notes tell us that the knee is in all respects better. I do not consider him, however, by any means cured; and he will probably require rest, either in bed, or by means of splints, for a long while, and when allowed to use the joint again he must exercise the greatest caution.

In such cases as these you require several measures to get rid of the thickened condition of the soft parts, on which the stiffness depends; of which, iodine lotion, or hydrochlorate-of-ammonia lotion, or local vapour baths, or shampooing, or effusion of water from a height, as from a pump or douche, are the best.

[This man continued to get better till he went out, on April 9th, and as the swelling subsided it became evident that there was thickening of some parts of the synovial membrane, feeling like semi-cartilaginous masses movable with the membrane to which they were attached.]

10. The last case I invite you to observe, is that of a girl named J——, but I have only time to allude to it as illustrating a not unfrequent joint affection, in which, with the most severe pain, so that she cannot bear to be touched or moved, there is yet no real disease; it is hysterical pain only of her hip and knee of a very aggravated kind, depending on her general health. At the same time, never forget that acute hysterical pain is often added to real disease, so as to mask and conceal its symptoms; and let your proceedings be cautiously directed, lest you increase the primary affection by that exercise of the joint which the hysteria would require, if alone.

ON

PERIOSTEAL DISEASE AFFECTING THE DURA MATER.

By R. H. Goolden, M.D. Oxon., F.R.C.P.,
Assistant-physician to St. Thomas's Hospital.

Continued from Oct. No., p. 278.

Periosteal disease; name—why not periostitis. Inductive laws—1. Definition; 2. A specific disease; 3. Exciting causes; 4. Antidote; 5. Susceptibility; 6. Influence of age and sex as well as habits of life; 7. Symptoms; 8. Locality of development; 9. State of the periosteum; nodal deposit. Diagnosis in less obvious situations: shoulder-joint; treatment; nitric-acid issue; hands and feet after gout; fangs of the teeth; dura mater; statistics; may co-exist with other morbid forces.

Having endeavoured to show, in the last number, that periosteal disease of the dura mater is a frequent cause of a very severe form of headache, and leads occasionally to serious consequences, such as epilepsy and paralysis, I now purpose to offer the results of a more general induction from cases of *periosteal disease*. In adopting the name periosteal disease, I must disclaim any intention of asserting a theory as to the seat or nature of the disease itself. I have rejected the usual term *periostitis*, because I do not consider that there is any ground for concluding that the periosteum is more than secondarily affected, and certainly it is not always inflamed; and with every reluctance to change names, from the confusion necessarily attendant on such changes, I think we cannot too soon abandon those which are theoretical and involving doubtful theories. Without venturing to assert positively that the disease in question has its seat more properly in the bone than in the membrane, I can refer to cases where inflammation and suppuration of bony structure without nodal deposit, have been attended with intermittent pains of great intensity, relieved only by the trephine; and as far as we can form an opinion of pains endured by others, the quality of the pain seems to be very similar, although we have no positive proof of inflammation of bone in nodal disease.

The following laws are the inductions of my own clinical observations.

1. There is a morbid condition of the human body, giving rise to congestion of the periosteum, including the dura mater, with deposits of earthy matter between the membrane and the bone.

2. This morbid condition is properly a specific disease existing in certain constitutions, which may either remain latent or be called into action by external influences.

3. These influences are mercury, purpura, fevers, or any cause which depresses the vital force or germ-life, and especially exposure to cold, damp, and absence of sun-light.

4. Iodide of potassium has a specific influence in arresting the diseased action, but not of curing the morbid diathesis, which is always liable again to become active whenever the vital force is lowered.

5. There are some constitutions which take on this diseased action readily after a very small quantity of any mercurial preparation has been administered. Nor is there any influence so powerful in its production as mercury, (a reason for its having been so often regarded as a symptom of secondary syphilis.)

6. It occurs at all periods of life, in both sexes, and in virgins as well as married women—(this is a simple matter of statistics.) Prostitutes and their male associates being more liable to periosteal disease than others, does not so much indicate a venereal origin,

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as it indicates the co-operation of many exciting causes, viz.—mercury, night exposure, mental distress, dissipation, and destitution. I can refer to many cases of periosteal nodes in young women whose social position affords the strongest ground of confidence in the absence of a syphilitic taint, as well as in boys before the age of puberty, in which there was every assurance that syphilis had no share in their production. I have now two well-marked cases in Luke's ward, of the respective ages of thirteen and fourteen, and I have pointed them out in private practice, to the satisfaction of able and experienced medical practitioners. Such cases taken separately may not satisfy some of my professional brethren, who believe in the universal depravity of the human race; but when taken altogether, the probability becomes as nearly positive as the inductive process can render it; for it is highly improbable that boys, and even young girls, can suffer from syphilis without applying for relief, and that, of all secondary symptoms, periosteal nodes should so often remain as the only trace of syphilitic taint. It is argued that the parents' sins are visited upon the children; but surely such an assertion is merely conjectural, and requires more proof than is offered; though we may readily admit the influence of syphilis in parents in developing hereditary disease in the offspring, by its lowering the power of the germ-life.

7. The disease, in its state of activity, is indicated by local pain and wakefulness, commencing for the most part from eight to ten o'clock every evening; towards morning the pain abates, and is succeeded by perspiration; and it is attended with gradual emaciation. The period of the commencement of the paroxysm is remarkable, and a good index of the nature of the complaint, but I have cases recorded where the patients have been awakened from their sleep by the paroxysm at a much later time, and I have two well-marked cases where it commenced between eight and nine in the morning; one of these is now under treatment. She lives at Woolwich, and had been treated for brow ague; quinine, steel, and emetics, as well as aconite as an external application, had been tried without relief, ague prevailing greatly in that locality. Profiting by the failure of former treatment, which I might otherwise have adopted myself, I gave the iodide of potassium, with some mistrust in the result; but the very marked relief, after seven months of constant suffering, has confirmed my diagnosis. The exceptions are sufficiently numerous to prove that the exact time of the accession of the paroxysm is an accident, rather than a property, of periosteal disease, though sufficiently frequent to be of great practical value, and therefore I say, "commencing, *for the most part*, from eight till ten o'clock every evening."

8. The locality of its development is very uncertain, but may be wherever the periosteal membrane extends, whether over bone or cartilage, dependent upon some variable predisposing causes. The most frequent localities are the cuticular surface of the tibia, of the ulna, the cranial bones, the sternum, clavicle, ribs and cartilages, the crest of the ilium, but very frequently in other less obvious situations. To these I shall refer presently.

9. During the paroxysm, the periosteum is greatly congested, and very sensitive, a deposit of bony matter taking place at each paroxysm.

Before the experiments of Dr. Robert Williams upon the use of iodide of potassium in St. Thomas's Hospital were generally known, it was common in very severe cases to cut down upon the periosteum, and to divide it. When a dresser at St. Bartholomew's, I remember to have seen several instances in which this was done, and, as I was then taught, for the purpose of relieving the tension caused by the node. The bright crimson colour of the membrane was remarkable, and this colour was considered a proof of its inflammatory state. However, I believe it is now admitted that the remission of the paroxysm is an evidence that the pain is not dependent upon tension, which would be a constant cause; and that the congestion of membrane is a normal state under some circumstances, as in young bone during its development from cartilage, and about injuries where reparation is necessarily attended with the deposit of new bony matter. Moreover, the membrane itself is often relaxed as well as thickened over the node. Also, I must observe that the nodal deposit is usually softer, and contains less earthy matter, than the bone itself. With a tolerably sharp penknife it may often be cut off from the bone, the hardness of the bone protecting it from being injured by the knife; but the degree of hardness varies according to the nature of the bone, the age of the patient, and the duration of the node. There is reason to believe that when inflammation occurs, suppuration is the consequence, and then a separation of the membrane. This occurs occasionally, and I have observed it several times at the lower end of the femur and at the carpal end of the radius, requiring the pus to be let out; but I cannot find that I have met with it in other situations, nor do I remember to have done so; and it is very remarkable how very seldom, comparatively, suppuration takes place.

I shall conclude with a few words upon the diagnosis. The ordinary nodes are too obvious to need any remark; it is only when the disease is less palpable that there is any room for mistake, and I shall refer to a few such instances.

The upper end of the humerus and the lower end of the femur are very common seats of its development, and often overlooked. The shoulder is aching, tender, cannot be moved on account of pain; there is no perceptible swelling, (the swelling occurring under the covering of the deltoid and biceps, near the joint;) the muscles are extenuated for want of use; the pain is more severe in the night; there is no effusion in the joint, and the patient keeps the shoulder elevated; the muscles being inserted into the periosteum, we can easily account for the pain on moving the joint. The pain occurs at first in nightly paroxysms only, but there soon follows a state of permanent congestion or subacute inflammation, which I believe rarely extends to the joint, though in two cases, after all pain even on movement had subsided, the movement of the joint was limited by adhesions. Such results are very rare indeed. The hip-joint is liable to a similar affection, but it is not so common. These cases are particularly amenable to remedies. The iodide of potassa is given three times a day; and when of any long standing, blisters or issues are necessary to relieve the chronic inflammation, which I believe to be the result, rather than the essence, of the proper diseased action. I very much prefer the nitric acid issue; it is applied by dipping a piece of lint, the size of the issue required, into strong nitric acid, and applying it, not too wet, to the tender part; it is best to place it anterior to the joint; then it should be covered over with a piece of lint, saturated with carbonate of soda, which will prevent its spreading beyond the desired extent; the pain so produced is considerably less, and of shorter duration, than that produced by caustic potassa, and it is less formidable than the moxa. It is then covered with a linseed poultice, or cotton wool, moistened, and covered with oil-silk. The slough usually comes away in five or seven days, and the discharge will continue till the

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pain is quite removed; but it must be borne in mind that blisters will give no permanent relief, unless the iodide of potassa is given internally.

I must refer to some painful swellings of the tarsal and metatarsal, as well as carpal and metacarpal, bones, often observed to remain after attacks of gout, when all active signs of gout have subsided,—and I believe sometimes mistaken for gout,—and to the known success of the iodide of potassa in relieving the pain. These swellings of the fingers and wrists are very different from chalk-stone deposits, though they disfigure the hands. They are very common in advanced life, and then they rarely subside so as entirely to restore symmetry of form. But the same observation holds good in all other forms of periosteal deposit; that is to say, although the activity of the disease may be arrested by iodide of potassa and blisters, the absorption of earthy matter in old age is much more difficult; the pain will subside, but the tibia and frontal bone still retain the swelling and unevenness.

Another seat of periosteal deposit is on the fangs of the teeth, causing the most agonizing toothache, without any apparent decay of the teeth. The fang of the tooth becomes thickened, too large for the alveolar cell, and, when drawn, the membrane shows unusual vascularity, and there is a deposit of dentine, softer than the fang of the tooth, and may be cut with a penkife, (as I mentioned in the case of nodes,) between the membrane and the fang, giving it a bulbous form, and rendering it difficult to be extracted without breaking. This is not uncommon after mercurial salivation; but it is observed sometimes where mercury has not been given; and I am told by Mr. Stokes, of Lower Brook-street, who showed me many specimens of such teeth, that he has observed them in ladies who have taken metallic remedies for a continuance—especially salts of iron. But it is a question for still further inquiry, whether those patients had not been suffering under periosteal disease, and that steel had been given for the relief of headache and remittent pains about the chest and other parts—sometimes for neuralgia—all dependent upon this state of the system.

But the most obscure cases of periosteal disease are those which affect the dura mater, to which I have already alluded. Of these, I have recorded

12	cases of	Epilepsy and nightly headache.
3	,,	Epilepsy and paralysis.
1	,,	Paralysis.
5	,,	Fascial neuralgia.
73	,,	Headache occurring in nightly paroxysm without nodes.
Uncertain, but in a very large proportion.		Headache, with development of the disease in other situations, as in nodes, or in disease of the shoulders.

The duration of the disease, when relief was sought, varied from three weeks to more than three years. The nightly paroxysms have always yielded to the iodide of potassa, though I have been obliged to use opium when the patients seemed exhausted by want of rest, and applied blisters to the head, when there was pain between the paroxysms. When that treatment has not been successful, I have not included those cases in my reckoning, as they are few, and I have had good reason for believing that other causes than periosteal disease were in operation.

There is no reason to reject the idea that other morbid forces may co-operate with periosteal disease in producing anomalous and unusual results. Suppuration and exostosis are not the usual results of periosteal disease in otherwise healthy subjects, but they are not infrequent in the strumous and syphilitic. One of the most remarkable characters of the pure periosteal disease appears to be the amount of nodal deposit that may take place during the activity of the disease, and its absorption under appropriate remedies, though the power of absorption is less perfect as age advances. When these deposits take place within the cranium, it can hardly be otherwise than that the cerebral functions should occasionally be interfered with. Experience shows that they produce the effects of pressure and irritation, under some circumstances only, which are not quite determined—probably when the deposit takes place at the base of the brain, or at some particular points, as on the sphenoid or petrous portion of the temporal bone; but it also shows that deposits may and do take place within the cranium without interfering with the functions of the brain; that the arachnoid and pia mater remain healthy when the dura mater is in a state of disease; and that this state of disease is common, specific, recognisable, and remedial: and it remains for others' experience to test the truth of my conclusion.

(To be continued.)

OBSERVATIONS ON PUSTULE MALIGNE,

AS COMMUNICATED TO THE AUSTRIAN, PORTUGUESE, AND DANISH GOVERNMENTS.

By C. TRENERRY, M.R.C.S.E., L.A.C.,
Assistant-physician to the Civil Hospital, Gibraltar.

It appears that Christoba Martinez, aged sixty, a Portuguese by birth, presented himself as an out-patient of this hospital on the 21st of October, 1850, suffering from the pustule maligne; he stated that he had been navigating on board a vessel laden with wool and salted bullocks' hides from Larache.

On the 14th of the following month, Manuel Fernandez, aged sixty, a relative of the above, was admitted with a similar disease; he said he was a fisherman, and had not been near any wool or hides.

Francisco Lapena, aged forty-eight, a Spaniard, and Francisco Docarmen, aged sixty-eight, a Portuguese, both mariners on board a Portuguese vessel laden with hides and gum, were similarly affected.

Jose Pedro, aged fifteen, a Portuguese, had not been near any vessel, wool, or hides for fifteen days, but notwithstanding became affected with the disease, as did also Juan Bayestero, who had not been near the source of contagion for five days.

Juan Catania, aged thirteen, said he was standing on the wharf one Sunday afternoon, when he experienced a slight itching of the right upper eyelid, and the following morning the characteristic pustule showed itself.

On the 2nd of March, 1851, Lorenzo Pau, aged twenty-two, became affected, after being engaged in weighing salted hides on board a vessel that came from Tunis.

The disease was characterized in the above patients experiencing a slight itching in some part of the face, followed by a small pimple having a dark depressed centre, surrounded by several almost imperceptible phlyctinæ, from which oozed an ichorous fluid; the glands of the neck on the affected side, but more especially the parotid, became enlarged and indurated; the head, face, neck, and upper part of the thorax were afterwards frightfully swollen and disfigured, the tumefaction having a peculiarly tense and elastic feel; the respiration was laborious, and attended with a singular croaking sound, whilst the voice was of a disagreeable guttural nature.

Two of the cases terminated fatally a few hours after admission; the one with symptoms of suffocation, and the other of apoplexy; the rest had a very protracted recovery, but more particularly the first case, whose life was compromised on different occasions by

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extensive suppuration and sloughs having formed on the left side of the face and neck, attended with frequent alarming attacks of hæmorrhage, so much so, that on one occasion my assistance was suddenly called for by Drs. Merry and Cortes, (who had the chief care of the patient at his own residence,) and it became a question whether the carotid artery should not be ligatured; the poor fellow was spared the operation, and recovered after nearly four months' suffering.

The treatment consisted in an immediate and free application of the actual cautery to the affected spot, and afterwards the diacetate-of-lead lotion, which were sure to arrest the disorder if applied within twenty-four hours from its appearance; the bowels were cleared out by an aperient; and other symptoms, such as fever, suppuration, and sloughing, were treated on general principles.

The disease is generally considered contagious, and to depend upon carbuncles, or some peculiar virus existing in the hides at the time the animal is slaughtered, which remains permanent, and whatever preparation the hides or wool undergo, it cannot be destroyed; therefore, whether sitting on a hair-bottom chair, lying on a woollen or hair mattress, carrying a hair trunk, or wearing a woollen garment made with the affected material, disposes us to the dreadful malady; an opinion that is certainly not borne out by my experience: for it must have been observed how few became affected out of the numerous individuals that were necessarily engaged in those vessels having the hides and wool; besides, the immunity experienced by the medical men and relatives in attendance on those affected, carries some weight in favor of its non-contagious nature; but as additional proofs, I may mention that Drs. Merry, Cortes, and myself, have unavoidably had our fingers frequently covered with the blood and matter issuing from the sloughs that formed; further, I have inoculated some kittens with matter taken fresh from some of the above subjects without the slightest ill effects ensuing.

I am, therefore, inclined to suspect that insects are generated at some particular period, or under some peculiar condition of the animal, and lodge in the hide or wool, from whence they are apt to escape and seek a nidus in the skin of any other animal, which in its turn becomes affected after a short time with the poison secreted *sui generis* of this insect.

ON THE EFFECT OF PRESSURE ABOVE THE PUBIS IN UTERINE HÆMORRHAGE.

By Edward Williams, M.D., Dublin.
Resident-physician to the South-Eastern Lying-in Hospital, Dublin.

I was lately called to a case of uterine hæmorrhage, occurring after labour, and after the expulsion of the placenta. When I arrived I found the patient bandaged tightly; vinegar applications, also, had been used externally to the genitals; the pulse in both wrists was scarcely perceptible, and she appeared a good deal prostrated. The flooding had been arrested by the above means, at least partially. I applied pressure with the hand above the pubis, and instantly, not more than thirty seconds or a minute, it produced a magical effect on the pulse, which became bounding and strong, as if the heart had been stimulated to increased action. Theorise as you may, I leave this to learned physiologists; I merely state the practical results—viz., increased action of the arterial system and arrest of the flooding.

It may be said, all this is nothing new; all this is stated in books on midwifery. I am aware of this, and claim nothing original; but I believe that practical observations may strengthen and confirm the views of theorists and authors, and thus continued observation of many may do service to the talented few.

ON THE PATHOLOGY, ETIOLOGY, AND NOMENCLATURE OF BUTTON SCURVY.

By Dillon Kelly, M.R.C.S.L., Mullingar.

Button scurvy, a disease indigenous to the country parts of Ireland, was first noticed by the profession about twelve years since. Shortly after, it was incidentally mentioned by the late Mr. Carmichael, next by Dr. Osling, and finally Drs. Patterson, of Rathkeale, and Wade, of Belturbat, both published papers on it in the *Dublin Medical Press*.

It first appears as a just perceptible elevation of the cuticle, with reddish blush, apparently produced by a zone of vessels converging to its base.

Next, hypertrophy of the papillary layer develops itself; the cuticle gives way; becomes fissured in the direction of its rugæ, the perspiratory ducts become implicated, and a rough, punctuated, strawberry-like tumour is the result. A deceptive fissure sometimes surrounds its base, and is produced by the greater growth of the body of the tumour, as contrasted with its pedicle, so that it overhangs it on all sides. A lymphy secretion now oozes from its surface, which, drying, forms a dirty, brownish-yellow, irregular capsule, and if removed, exposes the excessively sensitive corpus papillare, which bleeds from the slightest touch. This secretion being highly contagious, gives rise to similar tumours on various parts of the body, which, if numerous, may affect the constitution through the medium of initiation.

It is supposed by Dr. Patterson to be essentially a disease of the cuticle, produced by development of the epidermoid cells, and nourished by endosmosis, yet immediately afterwards he admits that they are excessively sensitive and fleshy, thus implying that they must contain nerves. Now, that a disease can be a purely cuticular one, and yet contain nerves, is a decided solecism.

Again, he says the excrescences can be removed without producing ulceration or abrasion of the skin, but I happen to have a patient here now, Michael D——, one of my cases, who has three distinct cicatrices on the original site of disease, and by the law of deformities in burns, we know that when the cuticle alone is affected, no mark is the result.

The pathology of the disease, therefore, appears to consist in a hypertrophied condition of the papillary layer of the cutis vera, analogous to some cases of cutaneous whitlow as described by Hunter.

It being now an established fact that animals are capable of communicating specific diseases to man, I have a theory that button scurvy is produced by a specific contagion in "scab," and originates in the sheep, by which it is communicated to the human subject, either by actual contact of the virus with an abraded surface, or through the media of the nails, or from the use of under-garments manufactured from the wool of "scabby sheep," acting on the delicate skin of strumous subjects, predisposed through idiosyncrasy and filth to the development of fungoid diseases.

Some time ago, a well-marked case of pustulous ovinia came to my knowledge; it occurred to the son of a herd, who, in carrying home "scabby wool" in his hat, caught the disease in his scalp, which detached the greater portion of his hair; but was eventually cured by the same ointment with which his

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father was just then dressing the affected animals under his care. Here then is a case produced by the actual contact of the virus itself.

Its development from flannel manufactured from "scabby wool" is not to be wondered at, when we recollect that twenty years ago the under-garments of the lower classes were invariably composed of that material, and from the moment of its conversion into the final state until it became perfectly useless to its owner, it never once underwent the process of ablution, although subjected, during the whole of that period, to all those causes in heat, perspiration, and filth, so well calculated to call into action the slumbering virus of the disease.

Its disappearance, too, on the introduction of cotton as under-garments, is a fact tending to the same end; and if with this we couple its greater prevalence in shepherds' assistants—a class not very remarkable for excessive cleanliness—we have, I think, a combination of circumstances, all indicating that flannel and filth are most material elements in its production; and that the sheep is the most likely source from which it originally sprung, the following cases go a good way indeed in proving.

Case 1.—Sept. 21, 1840. James D——, aged ten, son of a small farmer, has six distinct spots of button scurvy on various parts of his person; two on the outer and one on the inner aspect of the right thigh, one in the popliteal space, one on the anterior aspect of the left forearm, and one on the right anterior inferior lateral triangle of the neck; has been assisting his father whilst dressing the sheep; has frequently felt itchy whilst playing with them, and after finding the "scab" for his father, has often "scratched" himself.

Case 2.—Nov. 30, 1844. Michael D——, aged nine, rather healthy-looking, but possessing a very fine skin and delicate blush, son of a herd, but whose mother is the subject of strumous carics, has three spots of button scurvy on the outer aspect of the right thigh, just above the external condyle of the femur, the commemorative history of which is so exactly similar to the preceding, that its enumeration would be merely a repetition, so may be omitted without loss.

In both these cases local means solely were applied. In the first, nitrate of copper; in the second, nitrate of silver and sulphate of copper. The first required five weeks for its removal, the second but half that period; strict cleanliness also was enjoined and adhered to during the whole treatment in both cases.

That the term 'button scurvy,' although a misnomer, should be applied to the disease under consideration, is not to be wondered at, when we find that the abstract term 'scurvy' had been made use of in England for two centuries, to express not only any species of eruptive disease, but also every malady whose seat was doubtful, or whose symptoms were obscure; and were it not that scabies itself had obtained a musical *nom de guerre*, it also would have been merged in the centralizing and popular term.

The substitution of the compound 'ecphyma globulus,' by Dr. Patterson, although not the first attempt to improve its nomenclature, was more happy than its predecessor, rupia; the first term, ecphyma, expressing its seat, the second, globulus, its resemblance to a page's button; but the analogy stops there, and no allusion either to its etiology or classification is implied by that compound term.

To adopt an arrangement, therefore, similar to the natural system in botany would, in my mind, be a desideratum, as, by putting it in the same group with a well-known skin affection, its distinctive character at once presents itself to the imagination of the reader.

Following the arrangement, then, of Cazenave's late work, I shall rank it in his chronic specific order, as a new genus Ovinia, and species Condylomatosa; the genus from its source, the sheep, and the species from its resemblance to the well-known venereal condylomata; it may therefore be called ovinia condylomatosa, yet still retain its popular name of button scurvy.

Should the term 'condylomatosa' be objected to as a species, my answer is that I consider ovinia presents itself in three distinct forms or species, viz.—condylomatous, pustulous, and psoriatic, the latter generally attacking the scrotum.

In conclusion, I beg most distinctly to be understood, that in offering this feeble and elementary attempt to elucidate a disease now becoming so rare amongst us, I am influenced only by the desire that its publication may stimulate others more competent to the task; and should it be productive of developing more fully the etiology and history of this now very rare and interesting affection, the sole object of this paper will be fully obtained.

ON A CASE OF HYSTERICAL PARALYSIS.

By William Thorn, L.S.A.

In the month of July, 1850, I was requested to meet Mr. Goodchild of Ealing, respecting the case of Mrs. M——, a lady aged 41, married, but without children, who had formerly been a patient of mine while resident in Paddington; she then suffered from disease of the mitral valve of the heart with regurgitation; having a strong bellows murmur and other symptoms of that complaint. Having advised quiet and country air, she removed from town and came under the care of Mr. Goodchild, who had before I saw her, taken her to a London physician of great eminence; at that time she was hardly able to walk, although not as yet paralysed. I do not know what was then done, except that no examination of the spine was made, and the uterus was stated to be free from disease.

Upon meeting Mr. Goodchild, we found Mrs. M—— in bed, unable to move her legs, the bladder also paralysed, and the rectum relieved only by enemata. The general health was not greatly disturbed, although the tongue was foul and the digestion bad. There existed, as far as could be ascertained upon examination, an obscure uterine disease, which I then thought might be abscess of the ovary; for during the course of the treatment pus was discharged, per vaginam, to some extent, and there was severe pain and shivering; this however must have been from the vagina alone, probably a thickened leucorrhœal discharge, for upon the post-mortem examination there was no trace of abscess, nor the slightest ulceration or abrasion of the uterus. Having explained to Mr. Goodchild that I thought some uterine disease existed, there being violent bearing-down pains, evidently enlargement of the uterus, and leucorrhœal discharge, and that the paralysis was sympathetic of this uterine irritation, we proceeded to apply the hot sponge test to the spine; upon reaching the centre of the same we found great pain, for even upon simple pressure our patient was electrified by the shock so caused. Eight leeches were applied at once to this irritable part, and on the next day a long blister down the spine; the blister was repeated weekly for eight times, and lastly, our patient had cold water poured, from a height of several feet, upon the back every morning. Strychine in small doses was given, which, from its stimulating properties, had the effect of producing regular action of the bowels, which effect of this remedy I have noticed in

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other diseases, especially where the bowels have been abused by large doses of quack purgatives. Tonics and mild mercurials were given by Mr. Goodchild, who undertook the general management of the patient, and under whose judicious care she rapidly improved, so that in the tenth week she was enabled to pay a visit some miles from home, was able to walk about her house with tolerable ease and comfort, the bearing-down and all other bad symptoms having left; and our attendance terminated amidst the congratulations of all parties, who had thought our patient would have died bed-ridden. This amendment continued for several months, but, alas! the uterine irritation returned, and our poor patient got little or no relief from a second course of the treatment; she got, however, tired of Ealing, came to London, and was again under my care in April last. She was then much weaker, again paralysed, and was passing the *Phosphates* in large quantity in the urine; she absolutely refused any application to her spine, except an opium and belladonna plaster. Finding her so ill, restless, and wretched, I thought of the advice of the late Dr. Blundell, as follows; he says, "some women suffer dreadfully, and find no solace except in opium or other anodynes." Again he says, "the measure of these remedies must be determined by the effect produced; nor is the largest dose of opium unjustifiable, provided it be the minimum which will relieve the pain. Unhappily there is no danger lest a bad habit should become formed; the patient is making a short journey to the grave, and all that remains to medicine is to lead her peacefully along the irremediable way—to soften her couch—to smooth her pillow—with wise and gentle hand to mitigate her suffering, and to conduct her undisturbed into the silent tomb."

Acting upon the views of so justly celebrated a man as Blundell, I controlled the pain and dreadful spasmodic twitchings of the limbs, by small doses of the hydrochlorate of morphia, a quarter-grain once or twice a day. This remedy was gradually increased, until at last my patient took, for the last two months of her life, six grains of the salt per diem. Under it her appetite improved, the paralysis once more ceased, and never returned, for she was able to get out of bed for the ordinary purposes, and although she only left her bed-room a few times, she was quite happy and comfortable. The bowels, however, rarely acted naturally, but were kept in action by warm-water enemata thrice weekly. A few days before her death, which took place on the 16th of this month, the tongue became dry and brown, and deafness to a considerable extent resulted; she was, however, still without pain, taking less morphia, but salines instead. She was found dead by the side of her maid, having departed without a struggle. I expected that a convulsive fit would have been the end, considering the deafness as indicative of an affection of the brain, but her intellect was unclouded to the last. Three months ago I said she would die in August; I had diagnosed softening of the spine many months before. My reason for *guessing* at August (for it was only a guess) was, that the usually disturbed electricity at this time would be more than a person so largely affected in the nerves could bear.

Post-mortem examination.—On the morning of the 17th of August, twenty-six hours after death.—Patient four feet eight inches high, and about sixteen inches across the shoulders, a very little woman, much emaciated. There was a slight bed-sore on one hip, only an abrasion of two days' standing, for Hooper's water-pillow had been used for many months to sit and lie upon, with much comfort. My partner, Mr. J. S. Beale, and myself opened the spinal canal, from the eighth dorsal to the fourth lumbar vertebra, and exposed the cord, which we found from the tenth dorsal downwards quite diffluent, only held together by the coverings, which were much congested. There was quite enough blood between the dura mater and arachnoid to amount to spinal apoplexy, at the posterior part of the cord, accounting for the very dreadful pain if the morphia was not constantly given, supposing the posterior column to preside over sensation. There were four ounces of fluid in the pericardium; the lungs were slightly blackened, but were otherwise healthy; no pleuritic adhesions; the heart was flabby, natural in size, but, upon opening its cavities, the mitral valve was found to be thickened to the extent of the sixth of an inch, and contained several spicula of bone and cartilage; there was also much bone in the attached and free margins of the middle semi-lunar valve of the aorta; the tricuspid valves were much more thickened than the mitral. It seemed wonderful that so extensively diseased a heart could have acted so long, for the bellows murmur had been detected for the last sixteen years. Upon examining the genital organs, we found the ovaries quite undeveloped, not larger than in a girl of twelve; no signs of corpora lutea, and she had never felt the slightest sensation during the whole of her married life. The uterus was four times its natural size, and contained in its *substance* five fibrous tumours, from the size of a hen's egg to a small bean; no sign of ulceration or abrasion at the neck; the mouth admitted the small end of the blow-pipe freely, until obstructed by the tumours. All the other viscera were healthy, especially the liver, showing that the morphia had not acted injuriously upon that gland. We did not open the head, as we thought the spinal apoplexy and softening quite enough to account for death.

The conclusions I would draw from this case are:—1st. That if the uterus be not healthily employed, it will be morbidly so; that is, it will make tumours if it does not make fœtuses. 2nd. That uterine disease sets up spinal irritation, which may be relieved or cured, in the same proportion as the uterus admits or not of relief; that spinal apoplexy and softening will result if there is no relief; that extirpation of the entire or part of the uterus might be tried, to save life, in such a case as the above, where the tumours are imbedded in the substance. Dr. Blundell cautiously advocates this plan. 3rd. That a great amount of heart disease can exist for years, and then not kill: there had never been dropsy, or any bad symptoms. And, lastly, that the dose of an anodyne is that which relieves pain.

EFFECTS OF MORPHINE IN HERNIA.

By Edward W. Doman, Esq., Essex.

J. S——, labourer, aged 32, a native of Suffolk, who came to this parish to work during harvest, of a spare habit, but muscular, has been the subject of inguinal hernia of the left side for five years. It has frequently come down, but he was always able to return it, on assuming the recumbent posture. On Monday, the 18th of August, he was attacked with severe purgings, probably from working in the hot sun, and drinking freely of new beer; this continued on the 19th, and whilst pitching sheaves into a wagon, the hernia descended, but was soon returned. About four P.M., the same day, whilst evacuating his bowels with much straining, it again came down; this time he could not return it, and lay all night on some straw in the farm-yard, in great agony. On the 20th, on his case being made known, he was sent home (about a mile) in a cart. I was called to see him at five P.M. As he was a good deal prostrated by the purging, and had taken no food since the previous morning, I did

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not consider it necessary to bleed him, but put him in a warm bath, as soon as I could obtain warm water, and attempted reduction by the taxis. It was a direct inguinal hernia of the left side, of considerable size, filling the scrotum of that side; tense and painful; he had vomited several times, and complained of much pain in the abdomen, below the umbilicus. After persevering with the taxis for some time, without avail, I had him put to bed, and gave him half a grain of muriate of morphine every hour, until he had taken one grain and a half. He was soon considerably narcotized; vomiting had ceased, and pain moderated. I again tried the taxis, without effect. Thinking he would become still more under the influence of morphine, I left him for a short time. The taxis was again tried, but had no effect.

About eight A.M. of the 21st, he had recovered from the effects of morphine; the hernia as tense and as large as at first, and having been in that state upwards of thirty-six hours; I told him I thought it would be necessary to operate, but I would first try a warm bath and bleeding. I bled him in the bath, *ad deliquum*, and attempted reduction, but failed; he was now put into bed, where he became sick, very faint, and covered with profuse perspiration. I again tried to reduce it, but without any effect on the hernia. On his recovering from syncope, I told him it would not be safe to delay operating any longer. It was now ten A.M. He positively refused to allow the operation. He was again in great pain, particularly on handling. I thought if I brought him more completely under the influence of morphine there might be a chance; and as he still refused to be operated on, I began giving him half grains of morphine every hour, until he had taken two grains and a half. About three P.M. he was quite narcotized, and on examining the scrotum I found it more flaccid; and on using the taxis, the hernia in a few moments passed up easily; he was immediately relieved, after having been forty-eight hours in suffering. He slept quietly that night, kept himself quiet all the Friday, his bowels acting that day without medicine; and after fitting himself with a truss (which he had never yet worn), he returned to his work on Monday, the 25th.

In the *Monthly Journal of Medical Science* for 1841-2, formerly edited by Dr. Cormack, several cases are given of hernia having been reduced through the influence of opium; and one (Number for July, 1842, page 591,) where three grains of solid opium and four and a half grains of morphine were given in the course of a few hours, before reduction could be effected. I have myself, whilst residing in the West Indies, seen several cases reduced by means of opium, and this is the third case that has occurred to me in this village within three years, where morphine has been effectual in hernia, twice in one individual. In the case of J. S., the hernia had been strangulated twenty-four hours before any medical man saw him. Had bleeding any effect in rendering morphine more effectual the second day? Perhaps it had. I should in future, particularly in young and able subjects, always have recourse to bleeding before using morphine.

ON A CASE OF TRUE ANEURISM OF THE HEART.

By Samuel Edwards, M.D.,

Physician-Accoucheur to the St. Marylebone Institution for Diseases of Women, etc., etc.

On May 15th, 1850, I was hastily summoned to the residence of Sir J. S——, who was reported to have suddenly fallen down in a fit whilst entertaining a party of friends. His residence being contiguous to my own, I was by the side of the patient within a few minutes after the occurrence. On entering the drawing-room, I found him lying partly on a sofa and two chairs, supported by his friends and servants. His face was livid, eyelids closed, nostrils dilated, mouth open, and tongue slightly protruding, which, with the under lip, was swollen, and of a darker hue than the face generally. The pupils were firmly contracted; not the slightest pulsation could be detected in any of the larger arteries, nor could the hand or ear discover the feeblest action when placed over the præcordial region. After my arrival there were two or three slight apparently spasmodic attempts at inspiration, and on his being moved higher up on the sofa, the pressure on the chest and abdomen occasioned a noise in the throat familiar to those accustomed to post-mortem operations, but which was construed by the friends around to his groaning. Life was, however, extinct. The application of a few external remedies was adopted, not with the idea of proving successful in restoring animation, but merely with the view of passing away a few minutes, in order to prepare his lady and family for the appalling shock which so sudden an event could not fail to produce.

Having obtained permission to examine the chest and abdomen, the following is a brief detail of the post-mortem appearances:—The external inspection presented no peculiarities; the body was that of a corpulent and well-formed man. On dividing the integuments over the chest and abdomen, there was a subcutaneous stratum of fat, varying from an inch and a quarter to two inches in depth. On removing the sternum, the pericardium was seen considerably distended; on opening it, which was accidentally done by the gentleman assisting me, a considerable quantity of yellowish serum escaped, which, however, was not measured, from this untoward accident. On slitting up the pericardium to a greater extent, a loose, dark clot of blood was seen completely encircling the heart, and consequently quite concealing it. On carefully removing this mass of coagula, we found it to weigh ten ounces—a weight which was not commensurate with its apparent volume. The heart was lying in its normal situation, and was of natural size. On examining it in situ, to detect if possible the source of the hæmorrhage, we immediately discovered a rent, of about an inch in length, with uneven edges, situated in the *centre* of the left side of the *left ventricle*. Around the heart, externally, the investing serous membrane was separated from the muscular substance to at least an inch and a half in diameter. On carrying the investigation deeper, the external rent was found to enter a cavity, formed in the substance of the wall of the left ventricle, which would contain a full-sized walnut; from this a smaller irregular opening, of about a quarter of an inch in length, communicated with the cavity of the left ventricle. The muscular tissue of the heart was considerably altered in colour and consistency, presenting the appearance of red softening; it was of a deep claret hue, and under very moderate pressure of the fingers the substance was readily torn; no appearance of anything like pus was discerned. The walls were of normal thickness, and all the valves sound. No other morbid appearances were revealed in the thoracic organs. The abdominal viscera were healthy, with the exception of the kidneys, which were extensively diseased; they were embedded in an enormous quantity of fat, much enlarged, and of a claret colour, or reddish black; both were lobulated as in the fœtus. The capsules of each presented ulcerative patches, two of which in the left kidney were very deep, of a conical shape, (bases external,) and extended from a half to three-quarters of an inch into the substance of the organ: the capsules were thickened, and readily torn off; on

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longitudinal sections of them being made, there was considerable congestion. The tubular portions of both organs were completely obliterated, with the exception of a small portion of the cones in the right kidney.

Remarks.—True aneurism of the heart is a disease of very rare occurrence, and comparatively but few cases have been recorded. Corvisart was the first author of importance who described it with accuracy, and although Morand and Laennec speak of it, the former confines his observations to valvular aneurisms, and the latter, from his remarks, would lead us to infer that he had not met with true circumscribed ventricular aneurism. This author, in referring to Corvisart's case, terms it "partial dilatation," and further on he says, "I myself have never met with anything of the kind." More recently, Breschat, Cruveilheir, Hope, Latham, Andral, Chassinat, and others, have written on the subject; but the best monograph, undoubtedly, is that of Mr. Thurnam.*

On reference to the above example, it is seen that the morbid change was situated in the *left* ventricle; such almost invariably has been the case, for on reference to various authors, three cases alone are mentioned as having taken place in the auricles, and even these were doubtful. The reason of its being so uniformly in the left heart, appears explicable from the fact that the arterial tissues are endowed with a higher degree of organization than the venous; because the arterial blood is more stimulating, and thus more liable to create morbid excitement: and because the mechanical exertions of the left ventricle are very considerably greater than the right, and consequently laceration of structure is more likely to occur. The thinness and expansibility of the auricles, the comparatively trifling mechanical power required to expel their contents, are conditions favouring their immunity. Coarctation of their valves, it is true, augments functional power, and gives rise to their dilatation, but then their distention is equal and cannot be called aneurismal. These aneurisms vary greatly in size; the cavity may be not larger than a hazel-nut, or, as in Corvisart's case, it may be as large as that of the heart itself. It may, also, be restricted to the wall of the ventricle, (as in the above instance,) without altering the external configuration; or a tumour may be formed, protruding from the surface, as large as the whole organ. In the report of the post-mortem examination it is seen that the aperture connecting the aneurism with the ventricle was small and irregular. This orifice has been found to differ in its dimensions, in some instances being very small, in others almost equalling the diameter of the cavity itself; its margins are generally indurated, either fibro-cartilaginous or osseous. This case, however, proves an exception, its edges being merely irregular and ragged. The lining of the above cavity presented a thin and easily lacerable membrane, which appeared rather a continuation of the endocardium than an adventitious product. When an aneurism of this kind has had its cause in mere unequal dilatation of the walls, the endocardium may be so stretched as to cover unbroken the abnormal cavity; but when the endocardium has been primarily diseased, its corrugated and more opaque condition renders its line of demarcation easily determinable. From the attenuation at the point of rupture it was obvious that life had for some short time been carried on whilst the thin serous investment of the ventricle had alone interposed between the cavity of the tumour and that of the pericardium, and the edges of the laceration were precisely such as would result from a sudden tear. The internal pressure of the current of blood, not being counteracted by organized lamellæ, would continue to produce a gradual absorption of the muscular structure, till at length the attenuated wall of the tumour was unequal to the requisite power of resistance, and the result of rupture supervened. No pus being manifest in the above example, it is quite clear that the pathological change, from this in connexion with other facts, was of a chronic nature; indeed, there are but three cases on record where pus has been noticed in the muscular tissue, and in two out of the three (Latham and Salter) death very rapidly occurred. Inflammation of the endocardium is almost uniformly the concomitant of acute rheumatism, and is assuredly the chief cause of cardiac aneurism. The membrane having become thick and indurated from one or other of the analogous transformations, undergoes slight solution of continuity; the fissure becomes wider and wider; coagula and bloody detritus are deposited, at first in small quantity, but by exposure to the current of the circulation they increase, until such a volume is accumulated as to exert pressure on the muscular parts adjacent. The same causes and the same effects continuing, irregular dilatation, in other words, aneurism, is the result. There is another change which the organ might undergo—and that was certainly associated with the example now given—which merits mention in speaking of the causes, viz.—*softening*. It is seen that the substance could be broken beneath the finger, and was abnormally red. The softened portion of the heart may be of different hues,—red, whitish-brown, or yellow. That of the first-named hue, which it is of most importance here to speak of, owing to excess of blood in the capillaries of the muscular and filamentous tissues, incontestably results from inflammatory degeneration. But in acknowledgment of this fact, it is not to be inferred that pus should accompany it as a natural concomitant, because every form of inflammation does not necessarily terminate in suppuration. Might it not be caused by primary lesion of the blood, as in purpura and typhus? such changes of the blood might be followed by molecular perversion of the sarcolemma, as we know to be the fact in the more common pathological appearance of fatty degeneration. The kidneys were congested, granular, and lobulated. Congestion and other parenchymatous changes in these organs are frequent accompaniments of ancient lesion of the heart, especially where *hypertrophy* has long existed. Dr. Wardell, who has paid much attention to diseases of the heart, and whose extensive experience in pathological anatomy in Edinburgh gives weight to his opinion, states, that organic disease of the left ventricle, more especially in hypertrophy and the various forms of softening, is a very frequent forerunner of morbid changes in the kidneys. Microscopic investigations have revealed an important fact relative to morbid softening of the viscera, viz.—that whenever the heart is softened, analogous changes may be looked for in the liver and kidneys; and perhaps if attention had been paid to other organs, the same observations would hold good. Lastly, with regard to the *diagnosis* of cardiac aneurism, no rules can even be attempted; the affection is of so very rare occurrence, and death mostly occurs instantaneously, or from some other form of disease in which auscultation was not indicated. Probably, had the stethoscope been applied, the first sound of the heart would have been heard louder, roughened, and more prolonged than ordinary, and this most readily detected at the apex. The valves being healthy, it is fair to infer that the second sound would not be altered. It may be mentioned that about two years ago, the deceased had a slight paralytic affection, manifesting itself in numbness of the left arm: latterly, for several months, he complained of pain ascribed to the posterior part of the thorax,

* Medico-Chirurgical Transactions, vol. xxi., 1838.

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immediately below the point of the scapula. Pathologists have had some difficulty in accounting for neuralgic pains of the heart, but when we remember the experiments on the functions of the pneumogastric nerve, by the late Professor John Reid, the difficulty is immediately removed.

PARTIAL ANCHYLOSIS OF THE LOWER JAW REMEDIED BY DIVISION OF THE MASSETER MUSCLES.

By W. J. Little, M.D., London.

A healthy woman, aged thirty-three, of steady habits, not hysterical aspect, applied to me for relief of a contracted condition of the jaws. My report of the case is as follows:—

She states that for three years she has been unable to open her mouth, and that during this period she has subsisted entirely upon fluid or semi-fluid aliments. The contraction immediately followed a mercurial ptyalism excited for removal of some inflammatory ailment. On examination of the mouth, the maxillæ are observed to be firmly approximated; the teeth perfect, but those of the inferior maxilla much concealed behind those of the upper. No unnatural adhesions can be discovered between the cheeks and gums. Externally, and also within the mouth, the masseter muscles can be felt firmly contracted, verging upon atrophy rather than hypertrophy. Nothing abnormal is discoverable in the temporal muscles. It is impossible, on a hasty trial, to introduce even the blade of a knife between the dental surfaces, in consequence of the edges of the lower incisors being on a superior plane to that of the corresponding edges of the upper teeth. She possesses no voluntary power of separating the maxillæ, but sufficient lateral movement can be effected to show that complete anchylosis does not exist. The patient is of opinion that the left maxillary articulation is less free than the right, which corresponds with the impression I have received from my examination. She exhibits several box-wood wedges, used for separation of the jaws, on which imprints of the incisor teeth are visible. She says she is enabled, by moderate perseverance during three or four days to separate the incisors one-twelfth of an inch; beyond this amount she has never succeeded in temporarily diminishing the contraction. Several surgeons have endeavoured to relieve her by means of wedges and screws. She has also been an inmate of a metropolitan hospital, but without benefit.

Feb. 22, 1851.—Divided the masseters, with the assistance of Mr. Barrett and Mr. Gowland—the right muscle by *sub-mucous* myotomy, and the left *subcutaniously*. The mode of operation was as follows:—

In the case of the right muscle, I introduced an ordinary sharp-pointed tenotome through the mucous membrane of the mouth, opposite the anterior border of the masseter, on a line with the commissure of the lips, penetrating backwards, first between the muscle and the mucous membrane, and afterwards between the muscle and the coronoid process of the jaw, the knife being carried posteriorly, until it could be felt by the left index, placed behind the ascending ramus. On turning the *edge* of the instrument towards the muscle, the whole of the fibres between it and the integuments were severed.

For the division of the left muscle the tenotome was passed through the skin at the infero-posterior angle of the jaw, and carried *flatly* along the surface of the bone towards the mouth. On attaining the mucous membrane—notice of which was received by the left index, purposely placed in the mouth—the point of the knife was carried carefully between the mucous membrane and the muscle, towards its anterior edge, the fibres having been divided in a similar manner to the section of the opposite muscle, although in a different direction. The puncture in the mouth—that which resulted from division of the right muscle—appeared inclined to emit red blood. This was immediately restrained by pressure of the part against the teeth, through a dossil of lint externally applied. The cutaneous puncture required no particular attention.

On the following day, considerable ecchymosis of both cheeks was visible, and she complained of some tenderness. The external puncture cicatrized immediately; the healing of the puncture in the mucous membrane was delayed for four or five days by a slight discharge. On the third day after operation, when tenderness and tumefaction were subsiding, the patient expressed her conviction that she possessed greater command over the jaw, but increased mobility was not apparent. She was desired to use the wedges as before the operation. On the fifth day I was favoured by Messrs. Craigie and Barrett with an instrument admirably adapted for separating the maxillæ when so closely contracted as scarcely to admit a thin spatula between the opposing surfaces. By its means rapid amendment was effected. Within a fortnight I was enabled to separate the incisors nearly one inch. She was not required constantly to wear any mechanical contrivance, but recommended to employ the extending apparatus many times daily for some minutes at each time.

The only pathological observations worthy of record during the after treatment were, that greater soreness of the left masseter was complained of, and that about a fortnight after the operation a painful globular swelling, corresponding in situation and size to the left maxillary articulation, presented itself. This swelling appeared to be attributable to some congestion of the capsular tissues and effusion into the joint. She was consequently desired to proceed less actively with the instrumental separation of the jaws, and to apply compound tincture of iodine to the part. Whilst these measures were adopted, the swelling quickly subsided.

The case proceeded most satisfactorily; with the aid of the instrument, a month after the operation, she was enabled to open her mouth to the utmost extent, and by volition could open it half-way. A few weeks later she could slowly masticate, and she had acquired greatly increased facility of speech. Tendency to re-closure of the mouth still existed, the case resembling in this respect contracted states of most other parts of the body, in which the tendency to relapse requires to be counteracted by persevering use of active and passive movements of the articulations. Mr. Barrett subsequently very effectually assisted me with the mechanical resources of the dentist's art, causing an apparatus to be prepared for wearing within the month, calculated, by means of springs, to act upon the dental arches, and assist the weak depressor muscles of the jaw in their antagonism to the powerful muscles which tended to close it. This apparatus, when first employed, occasioned irritation of the interior of the cheeks, and required frequent adjustment. At present (June, 1851) it is worn in comfort a few hours daily. By its means she can fully open her mouth in mastication and speaking, and even without it has greatly recovered the use of the part. I entertain no doubt that in this false anchylosis of the jaw, as in deformity of many other parts, the temporary use only of mechanical apparatus will be needed.

Remarks.—The infrequency of the application of tenotomy or myotomy to contracted jaw, invests this case with sufficient interest to justify its publication.

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The result of the treatment has quite equalled my expectations. A *cure* has not yet been attained, but the facility with which at present the subject of the operation is enabled to apply the mouth to purposes of assumption of food, mastication, and speech, indicates that perseverance in these uses of the parts will lead to perfect recovery.

It may excite surprise that a contracture which had resisted mechanical extension without operation, subsequently yielded when section of part only of the muscles which close the jaw had been effected. Thus, in a fixed closure of the part of three years' duration, it could not be doubted that the temporal and internal pterygoid muscles were more or less concerned with the masseters in the abnormal contraction. Or if the whole of the above muscles were not originally implicated, analogy with the phenomena observed elsewhere teaches us to apprehend that they may have become secondarily involved. Thus, in other parts of the body in which spastic or other contraction of one muscle occurs, we find that this primary contraction of one muscle is usually, after a time, accompanied with shortening and rigidity of all the muscles concerned in those normal actions of the part in which the primarily affected muscle bears a principal share only. Thus, for example, in wry-neck, we have reason to believe that in many instances the sterno-cleido-mastoideus, with or without its congener the trapezius, is primarily affected, but that after the lapse of a variable period, other muscles, the scaleni, for example, become shortened, and oppose restoration of the position of the head; or as at the elbow, the biceps appears to be primarily or principally affected, although after section of it the brachialis anticus, and aponeurotic and articular structures, for a time resist replacement. In the jaw, therefore, when we examine the masseters and feel them rigidly contracted, we should not conclude that the morbid closure of the mouth is attributable to shortening of these muscles only, but apprehend that the temporalis and pterygoideus internus may be similarly affected. From this argument it might be inferred that in any given case of deformity dependent upon muscular contraction, it would be necessary, in the operative treatment of it, to sever all the contracted muscles or their tendons. This necessity is recognised, and is adopted as far as practicable with speed and security. Thus, many years since, I pointed out the propriety, in the operative treatment, of severe talipes varus of infants, of severing not only the tendo-Achillis, but also the tendons of the tibialis anticus, tibialis posticus, and certain plantar structures, leaving untouched the other structures on the back of the leg and in the plantar region, which are more or less contracted in that deformity. Experience in treatment of many deformities, has, however, taught that, although division of all the contracted structures facilitates restoration, section of one or more muscles, having a principal share in maintaining a contraction, often suffices: the relief afforded by section of one tendon is considerable, rendering the remainder of the cure practicable by instrumental means.

The impulse towards restoration afforded by the removal of one obstacle renders the remaining struggle less considerable. I am not of opinion that section of one muscle or tendon operates indirectly, or by reflex through the nervous system, upon other (undivided) muscles, so as to calm down their resistance. The relief afforded is, I believe, through reduction of the quantity of resistance, and possibly in another mode analogous to certain physiological phenomena. Thus it is well known, in the animal kingdom, that the exercise of a power fully adequate to compete with any resistance a victim is capable of offering, appears to paralyze that resistance. The dominion of the more powerful animals over the lower is thus beneficially facilitated. In physiological experiments upon living animals, it has been observed that the tight grasp with the instrument of the physiologist arrests that resistance which previously obstructed observation during the experiment. Something akin to this is witnessed in the treatment of the insane, and in some diseases. It is true that in these instances the reasoning power of the animal or of the individual comes into operation, whilst in deformities dependent upon muscular contraction it is believed that the influence of the mind or of the brain is not exerted. But who shall venture to say what share the truly cerebral organs may not have in morbid muscular contractions? in some, at least, the influence of the mind is incontestable.

The present case illustrates the relief afforded in a fixed closure of the jaw by section of the masseter muscles, or rather of the principal mass of them, for the fibres attached on the inside of the coronoid process necessarily escaped division; the resistance afforded by the temporalis and pterygoideus internus having yielded to mechanical means previously unsuccessfully applied.

I may be excused one observation respecting the pathogeny of the case. The increased rigidity of the left maxillary articulation, and the globular swelling which formed in that situation during treatment, appear to indicate that on the occasion of the mercurial ptyalism, some inflammation extended from the neighbouring parotid gland to the articulation. Hence, when the ptyalism subsided, the usual freedom of the left maxillary articulation was not obtained. Notwithstanding the well-known indisposition of muscular fibre to assume inflammatory action, it is not improbable that the left masseter (or its aponcurosis) was involved in the inflammation. Whether or not the muscle was directly implicated in the inflammation, it seems probable that ptyalism, inflammation of the articulation, muscular contraction, and partial anchylosis, were the links in the pathogenetical chain.

I doubt not that many cases popularly termed locked-jaw, accompanied with cicatrices in the mouth, consequent upon the ulceration that occurs after fevers, ptyalism, stomatitis, or cancrum oris, present themselves, in which, after fair trial of mechanical means, and a satisfactory diagnosis of absence of true anchylosis of the maxillary articulations, myotomy and division of cicatrized bands, if any such be present, would lead to relief of the contraction.

It may not be superfluous to add, as a caution to over-ready operators, that discrimination of suitable cases is not invariably easy.* Above all, it should be remembered that many cases of closure of maxillæ occur in nervous females, subsequent to emotional and other influences, in which, of course, an operation is not advisable, as the onset, departure, and recurrence of such contractures may occur suddenly or without premonitory phenomena. They are, in short, sometimes intermittent in their character. In no case of muscular contraction should operation be employed until after persevering trial of suitable mechanical means by the practitioner himself.

* I trust I shall be pardoned for this apparent discouragement of tenotomy, but I know of so many unsuccessful cases of tenotomy applied to the lower extremities that I feel warranted in protesting beforehand against failures through want of caution, and, if not guilty of presumption, I might add, want of experience in the management of contractions in general, and of that special fact which opportunity can alone, here as elsewhere, give. Happily, half-cured cases of club-foot, &c., if properly operated, admit of ultimate restoration, even without re-operation, by perseverance in suitable manipulations by competent attendants, and mechanical treatment.—means applicable by every patient and inquiring practitioner.

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THE POLICY AND PATHOLOGY OF INSANITY.

By Joshua Burgess, M.D., &c., London.

Abnormal conditions of the nervous system and of the senses have, from their social consequences, occupied the attention of pathologists since the earliest periods, and it would be interesting to notice the views and opinions in which these maladies have been regarded, but it is the more immediate purpose of this inquiry to ascertain the opinions entertained at the present time.

Privation of the senses and insanity have been hitherto less considered in the character of diseases than of moral affections, and the lunatic and idiot became subjected to incarceration, punishment, stripes, and cords, more often than to remedial treatment, nor has this view of the subject passed away. Of late years, legislation has been exerted to mitigate punishment, and its solicitude has been to prevent the practice of unnecessary coercion; and even our best authorities in diseases of the senses and insanity have directed their exertions to a similar purpose, to carry out its behests. But we look in vain to their doctrines and practice for a logical code of remedial treatment, or for pathological results, and find their energies have been almost exclusively directed to the practice of a humane and mild custody of the insane, a most desirable object in itself. This is attributable perhaps to the character and nature of the disease: in most other diseases a *diagnosis* can be offered, and some nosological analysis adopted; but in an abnormal state of the senses this is difficult, and in many cases impossible, and every attempt for this object has been futile and delusive. For our present purpose let it be conceded, (although the writer does not implicitly adhere to it,) that the brain is the seat of disease in insanity, and also that the brain is a secreting organ. In diseases of secreting functions, such as the liver, kidneys, &c., the peculiar secretion becomes interrupted, and the materials they eliminate during their functional integrity are in that state thrown into the general circulation; thus the *bile* and *urea* contaminate the circulating fluids, and disease is the consequence; should not the analogy exist equally in regard of the nervous fluid, and when from cerebral disease it is not properly secreted by the brain, that it should consequently remain in the circulating fluids, and disturb the vital economy? If this be the case, it is interesting to ascertain in what way the nervous fluid, if thrown into the circulation, may produce derangement and disease of the general system.

This is reversing a view very reasonably entertained, which makes the brain vicariously affected, and the seat of disease to be situated elsewhere. Whether the brain be a gland or not in the usual acceptation of the term, it is agreed that it secretes the nervous fluid through the supply of the circulation; that its normal secretion depends upon the integrity of that supply; and that the cerebro-spinal system is as sensible, or more so, to vitiation of the *liquor sanguinis*, or to a too great or diminished supply of the circulating fluids, or to interruption of the function of the heart and vascular system, from whatever source it may proceed, direct or vicarious, as any other function.

This view of the subject has the advantage that it places these diseases within pathological laws, into which, hitherto, they have not with general consent been admitted; and includes in the inquiry scientific and comprehensive views, not limiting them to a mere question of police, of examination and certification, preparatory to seclusion, and which is the commencement of a routine of conventional amiabilities towards the patient; but, on the other hand, extends to them a practice similar to what is resorted to in the successful treatment of other, both surgical and medical diseases. And however much the value of non-restraint and free-agency may be estimated—and they cannot be too highly—yet they should not usurp the place of medical treatment, but be subsidiary to the carrying out of well-defined views and practice. To make management the principal object of solicitude in the treatment of the insane, is depriving it of aim and purpose; and it would be established upon a proper basis, if placed in the same category with therapeutical agents; the physician would be relieved from the performance of duties congenial with the office of a Sister of Charity, and would elevate his views to secure remedial and curative results, at present discouraged by a slavish devotion to managerial policy; it would be perfectly consistent, at the same time, with a strict and vigilant supervision of moral treatment, so essential to success, and to effect which a judicious selection of active and intelligent attendants is indispensable.

Honour is due to those who have triumphed over obstacles and prejudices to emancipate the lunatic. Civilization and an improved social state gave the word to which Howard responded in a cause less interesting to humanity; the objects of his benevolent mission being placed out of the social pale by the criminal law, whilst the first are similarly placed by the lunatic law.

The reason abnormal affections of the senses are more obscure than other diseases is that they are essentially secondary diseases, or diseases taking their origin from distant causes and a distant date, or from congenital characteristics which may have been entirely unknown, and otherwise masked by perhaps a condition of average health and constitutional vigour; the exception of mania and delirium, the symptomatic accompaniments of inflammation of the brain, can scarcely militate against this proposition. The word *acute*, in application to phenomena connected with abnormal affections of the senses, has immediate reference to intensity of moral expression and æsthetic demonstrations, and not to vascular excitement; and in the most acute conditions of mania there shall exist a cachectic state of the system, pale complexion, feeble pulse, and slow circulation. Notwithstanding the varieties and numerous phenomena of insanity, they are all of one family and group, characterized by depression of the nervous and vascular systems. Insanity not being a primary disease, is influenced by idiosyncrasy, mental and constitutional. Thus, after acute diseases have been subdued by treatment, by time, or diet, there may supervene a continued debility, or a delayed convalescence; or the patient may have been the victim of depraved habits, long practised; ultimately, epilepsy, struma, and latent or hereditary taints, become developed, and make insidious and chronic advances, increasing in the ratio of the depreciation of the physical powers, aggravated especially by diminution of nervous energy. The cerebral centres and nervous fibrils at length manifest subjection to these encroachments; and the duration of the antecedents and the poverty induced of the nervous system, measure the forthcoming mischief; since neuralgia, restlessness, irritability, and other mimetic ailments have probably become developed, which will be succeeded, in most cases, by delirium and acute mania; or some ruling error, accompanied with delusions, visions, and monomania, become manifested; and, earlier or later, insanity is thus established.

In the absence of diagnosis we cannot trace the stages or course which the disease will pursue, and

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which depends upon the idiosyncrasy of each individual, since constitutional peculiarity has its influence, even in epileptic insanity, and also in general paralysis of the insane, in which diagnosis and prognosis are more definite than in most other instances.

There are conditions of insanity having relation to a state of congestion and derangement of the nervous centres of organic life, which become easily amenable to active treatment directed to give tone and energy to the ganglionic and absorbent functions: such are hypochondriasis and melancholia, and the delirium of intense study, which are generally and quickly curable under treatment.

In an abnormal condition of the mind no distinct diagnosis can be formed, as in other diseases; a new element disturbs the phenomena attending these diseases, namely, the special senses, perception, and judgment become faulty, and sensation is often erroneous, being either preternaturally dull, or acute, and otherwise defective—thus, two patients having the same train of symptoms, rarely describe them in the same manner, and the replies of the patient, who is generally restless and suspicious, cannot be regarded until his confidence has been obtained; and his confusion and hesitation confirm how incapable he is, even when desirous, to assist in explaining his condition, or of describing his sensations and symptoms, which, on recovery, he will state to have been of the most painful and agonizing character; and he will often doggedly evade inquiry, on some occasions from incapability, on others from apprehension and fear, which are constant attendants upon diseases of the senses, and are psychological manifestations of nervous debility. In moral insanity, on the onset of the attack, neither hallucinations nor delirium may be manifested, but a composed mind and clear and vigorous intellect may exist; which nevertheless frequently terminate in raving madness. When hallucinations and illusions exist, the patient, convinced of their truth, acts upon their suggestions and impressions, and which, on restored health, seem as a dream, or as a suspension of personal identity for the time they continued, and their manifestation is reluctantly, and with hesitation and incredulity, admitted. Delusions in monomania, and in other states of insanity, may remain silent, till discovered by some accidental outbreak, when demonstrations of a painful character frequently and unexpectedly occur. Confidence can rarely be placed in the patient's intelligence and truthfulness, and no physical signs or evidences present themselves to unravel the history of the case. The pulse, the complexion, and expression of countenance are the only physical guides afforded, and are not implicitly to be trusted; but the pulse is generally compressible, irritable, languid, and sometimes intermittent, and in hypochondriasis is frequently preternaturally slow, not exceeding 40 or 50 pulsations in the minute, with a clear perception and calm intelligence, except upon some abstract idea; circumstances which denote congestion and disturbance of the nervous centres of organic life: whether the pulse be slow or quick—and it may be both within a very short period—it always indicates a feeble action of the heart, with tardy secretion, and a defective action of the capillary system of vessels. One redeeming circumstance is, that these diseases are almost always amenable to curative treatment, if early administered.

The chronic delusions of insanity present a curious interest; psychological visions and images become fixed upon the mind, and are seldom thoroughly erased, and although these hallucinations may come under subjection, yet every disturbance will find a centre of sympathy in the dominant error, and visions and illusions are frequently recalled, and rise up as evidences of the mischief past, and monitors for the future. This psychological state will be revealed to those who have inspired the confidence, and obtained a tranquil and sedative influence over the susceptibilities of the convalescent, or recently attacked patient, and present a strange camera obscura of intellectual error; and often, upon the proud lineaments of mental supremacy, the most enduring hallucinations of this nature are fixed, as in the instances of Dr. Johnson and the poets Cowper and Byron. It would be well if this confidence were always bestowed. Delusions, long harboured and smothered, break out into homicidal and suicidal manifestations, which otherwise might, on many occasions, have been averted. These considerations, amongst many others, enforce the necessity and obligation of judicious classification of the afflicted, a classification not measured by money, but suited to the intelligence, training, and intellectual qualities, since the mind in which may have been implanted the nicest refinement, may be penniless in pocket, and brutality may hold a heavy purse. These are painful revelations of the unsuspected ruin that frequently exists, and may at any moment overwhelm a noble mind.

Insanity is arraigned before two tribunals—Medicine and Law—which have little sympathy with each other, and little consideration is extended in courts of law to insanity. The almost irreversible verdict claimed against the lunatic plaintiff, and the new interests arising at the decease of his intellect, make him a secondary object to the regards of property; and the eagerness with which social death, and the transference of property, are accomplished in the case of insanity, is the most remarkable in which legal acumen is retained, and forensic ability exerted.

The traditions, and the precedents and authorities, of the courts, meagre as they are in reference to medical jurisprudence, hold their sway, and force analogies where experience fails them, to the repulsion of medical advocacy, which depends, single-handed, upon facts, physiology, and experience; and they regard with little courtesy a sister profession, since truly she approaches her courts with no other pretensions than having drunk, if not deeply, at the fountains of science and philosophy. Medical evidence is the more disregarded from its tendency to include within a physiological equity, difficult to refute, the whole question as it regards the lunatic, opposing rigid legal definitions by inductions derived from nature and experience.

Medical testimony, although jealously, is unavoidably admitted. The pleader feels his disadvantage in advocating a cause already out of the pale of society, and faces medical evidence with hesitation, in place of the audacity which usually characterizes the forensic mind, especially as its practice in these cases is modern; the plaint of the lunatic having scarcely been regarded in the courts, whose dark shades have yet to be penetrated with modern lights upon the subject of insanity. The motives of the physician have been assailed without umpire or appeal, the legislature having implicated the humanity of medical practice, and spoken, by penal awards, against injustice and cruelty, chargeable to the ancient state of the law and the prejudices of society, and not to the physician; and, lately, he has had preferred against him the allegation of advocating a spurious and overweening benevolence. These impeachments neutralize each other by their contradictions. Insanity is an estranged plaintiff, and the cold precepts of jurisprudence have no sympathy for the lunatic, who is become socially dead. This state of things must not be visited with too severe a judgment, insanity

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having been badly comprehended by laws made and existing from the earliest times, and which have rejected the lunatic with alienation and dislike. The courts, little acquainted with the subtle distinctions of insanity, regarded only moral or constructive insanity, in criminal cases, and were indisposed to receive it as a civil plaintiff, and also jealously repudiated the intuitions of medical evidence.

The inquiry, What has insanity to do with the law and with lawyers? is obvious, and includes the questions of personal liberty and of property; to sue on the last gage, would cause apprehension even in its mental vigour, much more in its state of imbecility and decay, when it cannot inspire that vitality into the legal mind which personal considerations might effect; thus rapacity on the one hand, and regard for personal liberty on the other, are the sacred issues determinable by the law. Through the establishment of cheap courts for the relief of the insane, security of property, and also personal liberty, might be more easily effected; and if a jury were only permitted to interfere upon sufficient evidence given of its necessity, or when property to a certain amount was involved, the present mode of certification and examination continuing, proper privacy might be maintained. Human passions conspire to wreck both mind and body; and if it were known upon how narrow a strait is the residence of sound reason, and the precipices and under-currents which surround it, we should be justly apprehensive. The luxuriant seasons of the human mind are frequently overcast with clouds, and on the some branch often grow the radiant bloom of intellect and its withered fruit. In physical science, if a balance or equilibrium becomes disturbed, its errors cannot be measured, and the *statics* of reason, when disturbed, are incapable of interpretation, there being no standard by which reason can be measured; and the laws of society have assumed definite interpretations, putting on one side the evidence of medical experience, which, warned by physiology, avoids generalizations and dogmatic opinions, and holds firmly to the evidences which distinctly characterize the idiosyncrasy of every individual case. Moral insanity has, from the complexity of its bearings, the difficulty of testing it, and the sacred interests implicated, proved the scape-goat of crime, as also its refuge and subterfuge. On the one hand, the field of insanity has been constrained and narrowed by judicial decisions, and again made too wide by medical testimony. Vice and crime must be unrelentingly rejected from the category of insanity, come in what guise they may; medical evidence, its natural guardian, has displayed a want of perspicacity in permitting the rights of the lunatic to be violated by *constructive insanity*, when its vigilance should have prevented it.

Moral insanity, manifested by criminal acts, is an unmitigated evil, its mischief being infectious and communicable; it is stained with crimes of the most pernicious tendency—a plague spot, without alleviation by law or by medical art, comparable only to blight or pestilence, which destroys the products of the earth, or sweeps away its inhabitants. Monsters of a moral character are more revolting than any physical aberration, however exaggerated, and should be removed from observation, since irresponsible crime exercises with impunity the force of example. The disposal of this question cannot be delayed; and in the settlement of the pleas of insanity, especially when connected with crime, the physician's experience will prove more available than the astuteness of the lawyer. If vice and intemperance had no rule over reason, our plans would be simple, since our motives and incentives would be devoted to a pleasing and an ameliorating, and also to a comparatively limited object; by far the larger portion of insanity being produced by vice and intemperance—its fruit being crime, and its proper tribunal the law. The traditional blindness of justice is not changed for psychological purposes; the impertinence of daring to soften and make mobile its stern decrees, and to uplift the folds which effect its impartiality and indifference, has been unkindly visited upon the testimony given by the physician. Courts of appeal should be established, for the satisfaction of small debts to the social creditor, in which the errors of the mind, and psychological and physiological evidence should be regarded, and the plaints of the lunatic listened to; that a code worthy of our advanced civilization may result, and thus tardily pallíate and commiserate, if unable to vindicate, the painful illusions, associated, amongst others, with the memory of Swift, Cowper, Johnson, Robert Hall, Byron, and Romilly.

(To be continued.)

ON A CASE OF PLACENTA PRÆVIA.

By A. W. Moore, M.R.C.S. Eng., & L.S.A.

On the 25th of June last, I was hastily summoned to see a patient in labour with her sixth child. I found the woman very pale and cold, her pulse small and weak, and with a pain in the back, not coming on at regular intervals. A friend of hers in attendance informed me that she had not suffered from hæmorrhage during her pregnancy, and that she did not expect to be confined for two or three weeks. I found the vagina occupied by coagula of blood, the os dilated to scarcely the size of a sixpence, and my fingers came in contact with a fibrous fleshy mass occupying the os uteri, and adherent to the whole of its circumference; from these circumstances there could be no doubt that I had to deal with a case of placental presentation. I ordered the patient to be kept perfectly quiet in the horizontal position, and all nourishments to be taken cold.

About six o'clock the same evening, I was sent for; I found her now suffering from regular labour pains, the os dilated to the size of a two-shilling-piece, and each pain attended with copious hæmorrhage. She became more anæmic. Being convinced that there was no time to be lost, I turned the child, and delivered immediately: the hæmorrhage ceased as soon as the feet had arrived into the vagina, and the placenta came away in about ten minutes, without any flooding.

The uterus continued to contract after the placenta came away, but, in consequence of a tendency to syncope, I was compelled to administer small doses of brandy-and-water at intervals.

At my next visit I found the patient considerably improved, and she ultimately had a favourable and speedy convalescence.

Remarks.—I adopted the practice of turning the child, in preference to removing the placental mass before delivery of the child, as suggested by Dr. Simpson, because I believe it to be less dangerous, both to the mother and child. But no individual case does much to elucidate the question as to which mode of procedure ought always to be followed, or which gives the more successful results; but yet I think, if practitioners would publish ordinary cases, and not wait until extraordinary ones present themselves, much valuable statistical knowledge might be gathered therefrom. In proof of the value of collecting together a number of cases which every day come under our notice, I may with pleasure draw attention to the splendid effects which have resulted from the labours of the talented author of the "Mirror." Therein he

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has, with indefatigable zeal, not only collected together the whole practice of the London hospitals, and truly reflected them as if in a mirror, but also he has contributed thereby to establish many rules of practice, which even surgeons attached to large hospitals could scarcely hope to accomplish.

ON A CASE OF PLACENTA PRÆVIA.

By W. Nix, Esq., L.A.S.

Cases of placenta prævia may not be uninteresting at this time from a difference of opinion in their management, whether to remove the placenta first, or to pass the hand and bring away the child.

I was requested to attend Mrs. B——, and was informed she had been subject to a discharge of blood for two or three days previous. I found the patient quiet, without pain, lying on the bed. Her mother was present, and informed me that she had, previous to my arrival, lost a considerable quantity of blood. On examination, I found the placenta over the os uteri, and on a return of pain a quantity of blood came away. Another pain shortly occurred, when a most alarming hæmorrhage took place, the patient beginning to talk incoherently, and becoming restless. The os uteri was soft and yielding. I passed my hand through the placenta, and by the feet brought down the child, when I let it rest, to give the system time to rally. After waiting a quarter of an hour or twenty minutes, I removed the child, which was dead, and shortly after the placenta, at the same time directing external pressure to ensure contraction of the uterus. Very little hæmorrhage took place after bringing down the child or on removing the placenta. The patient became unconscious after the severe hæmorrhage, and continued so for some time after delivery. I ordered her strong beer and egg, to be given frequently in small quantities, and by no means to be removed from the position she was in. On the day following she had somewhat rallied, and continued gradually to recover. This is not the only case of placenta prævia that I have met with; but this was the most formidable, and I feel confident, had I delivered without waiting for the circulation to become somewhat equalized, that she would have sunk beyond recovery.

I consider this, and cases like it, to differ much from where the placenta over the os uteri is thrown off by a process of nature. Nature in alarm, by contraction of the uterine fibres, separates the mass, and, by closing the orifices, prevents the blood flowing, and I cannot think we are justified in separating the placenta and opening a number of orifices, by which blood may and will flow without the contractile powers of the uterus to impede the discharge. We are only justified in acting where Nature is not sufficient for her task, but which is seldom the case, and it cannot be too often repeated, "A meddlesome midwifery is a bad midwifery."

NATURE'S CHEMISTRY INEXPLICABLE.

By J. L. Levison, Esq., Brighton.

There appears to be something anomalous in the effects of light on some flowers, which seems to render Nature's chemistry inexplicable. Probably some of your readers may solve the problem. For instance, it is said that when light is excluded from vegetables or flowers, they become white, and the inference which most students have arrived at, is, that light is the principal cause of the difference of colour, modified in different kinds by some difference in their structure. That the exclusion of light does certainly blanch some kinds of vegetables, is now admitted as an axiom in vegetable chemistry; for example, the endive, the celery, the white cabbage, &c.; and although the deprivation seems to induce the colourless condition of those mentioned above, it is not a law, otherwise it would be universal. And my object, therefore, in this brief paper, is simply to mention a few facts which seem to be exceptions. The *viburnum opulus* (guelder rose) has a green flower in the first instance, which gradually becomes white if the weather is fine and the light intense, the flowers under such stimulus assuming a most beautiful opaque whiteness. They remain for weeks in this colourless condition, and are finely contrasted with the dark-green leaves which surround them; and so delicate is the whiteness of the flowers that they are popularly called "snow-balls." So also the *lilius albus*, &c., present similar phenomena.

Can it be explained why the *viburnum opulus*, &c. &c., seem to be exceptions? That all the rich variety of colours in the domain of Flora, court the light which gives them their beautiful shades and tints, and in those we have named, that its presence should banish from them every vestige of hue or colour, shows that we have still much to learn on the chemical effects of light.

ON LEPROSY AND ELEPHANTIASIS IN SOUTH AFRICA AND INDIA.

By J. Berncastle, M.D., M.R.C.S., &c., London.

Leprosy is a very common disease throughout the Cape colony, and elephantiasis is also of frequent occurrence. These two diseases are considered quite distinct from each other by many surgeons; but they appear to have several features in common, and often to run into each other. A man affected with genuine elephantiasis of the legs for years will often take on leprous ulceration, the "*facies Leontodes*," &c.; so that I am strongly inclined to think there must be some connexion between the two, and that they may be considered as varieties of the same class of disease. An eminent surgeon to a public hospital in India, and several medical men at the Cape, who had seen much of these affections, confirmed me in my opinion, which was formed from a limited field of observation. Leprosy very often first attacks the joints of the fingers or toes, in which a slow ulcerative process goes on gradually until they drop off; the large joints are not spared, and sometimes the entire foot or hand is thus lost. This may occur at any age, and is hereditary in families. One healthy native woman, whose husband was a leper, had three children affected with it.

Natives and people of colour are more subject to it than white men, who are not, however, entirely exempt at the Cape, but I have only seen it in the former. It is not contagious in any degree; people have slept with lepers for months, and have been inoculated from them with impunity. The population at the Cape consider it contagious, and will not allow a leper to appear in the streets, where he would be mobbed; on that account, and from the unsightly appearance of such miserable beings, as well as from motives of humanity, the government have always kept them in establishments devoted to that purpose, several of which existed in different parts of the colony. Of late they have all been removed to Robben Island, in Table Bay, where there is a fine institution, under a resident medical superintendent, that contains at present upwards of 100 patients. Contrary winds alone prevented me visiting this, in a medical point of view, most interesting spot. Satyriasis, generally mentioned by authors as a feature in this disease, is never here found to accompany it, and I think must be some antiquated notion, founded in error, as quite

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the contrary to it is more frequently observed. At Simon's Town I visited, through the kindness of Mr. Shea, the resident naval surgeon, two cases of elephantiasis, here called by the people leprosy, of which I subjoin a report.

It is essentially a disease of debility of a very chronic and intractable nature, pursuing its course with a malignant character, little controlled by medicine, until it ends in a gradual breaking up of the constitution; the lungs become affected, and hæmoptysis is a frequent termination to the patient's sufferings. Large indolent ulcers occur mostly upon the extremities, not painful, the edges having a disposition to heal, but only to break out again. The pulse is remarkably languid, feeble, and slow; the tongue unaffected; the intellect not impaired. The disease is very insidious in its attack and subsequent progress. The first place in which it shows itself is generally the lower lobe of the ear or under the eyebrows, where a thickening of the skin takes place, which may not be noticed by the person until the gradual extension of the complaint to other parts first calls his attention to it; in time, one or both legs become enlarged, constituting "elephantiasis," and the face may or may not become swollen, and give the peculiar symptom of the "*facies Leontodes*," but any minor degree of swelling does not impart that aspect. In such a case, leprous ulcers break out on the legs or feet, which may drop off, as often occurs in genuine idiopathic leprosy when the affection begins, *ab initio*, with ulceration and total loss of joints. Both these diseases are generally found amongst the lower classes of natives, who have little faith in medical treatment, but prefer nostrums of their own making, and herbs of their own choice. Iodine, mercury, quinine, steel, arsenic, mineral acids, and all other potent remedies, have been fairly tried, but without any favourable result. Those who have had most experience in this disease have found more benefit to arise from twenty minims of Donovan's solution of hydriodate of arsenic with mercury, twice or thrice a day, until the gums are affected. Great attention to cleanliness, ventilation, and a proper diet, with pure air, are of more service than medicine.

In the present state of our knowledge, little seems to be known about the causes, pathology, or successful treatment of elephantiasis or leprosy. Some consider them two distinct diseases; others, I think with more reason, look upon them as connected with each other. Probably it is the same leprosy as spoken of in Holy Writ. In India there is no popular prejudice against persons so affected, who are commonly met about the streets; and many *Coolies*, with very well marked elephantiasis about the legs and face, are found working in the streets, the scanty garments of the Hindoos causing them to be easily detected by the passers-by. I saw in the Bombay Native Hospital several very chronic cases of leprosy, where the smaller joints were the principal parts affected.

The following are the notes of two cases of elephantiasis which I observed at the Cape of Good Hope.

Case 1.—Thomas, aged seventy, a negro, formerly employed in the dock-yard, has always been an active, temperate man, a water-drinker; has had it four years. His pulse is very feeble, slow, and compressible; tongue moist, with a peculiar huskiness of voice, which seems to depend upon thickening about the larynx and air-passages. He had the aspect of the "*facies Leontodes*," and had ulcers on the legs the size of a crown, which were taking on a healthy action. He complained of no pain; had not been under medical treatment for some time, but applied fresh leaves to the wounds; his appetite and intellect were good, and not being in want, he remained at home instead of going to Robben Island.

Case 2.—Henrick, aged thirty-three, a Malay, by trade a tailor; formerly of intemperate habits; does not now care about liquor; feels worse after it; sleeps well; appetite and intellect good; sight also: pulse and voice the same as the other man's; has never had satyriasis, but quite the contrary. He has on the legs, large, deep, flabby ulcers; the scrotum was slightly affected. He felt no pain, and having taken at one time various medicines, without much relief, did not care about treatment. In this case the "*facies Leontodes*" was gradually coming on.

HISTORY OF A

CASE OF CONGENITAL OVARIAN TUMOUR, WITH CYSTS, FATTY MATTER, HAIR, AND BONE, IN WHICH OVARIOTOMY WAS PROPOSED.

By Robert Lee, M.D., F.R.S.

I was requested by Mr. Gaskell, in November, 1842, to see Miss F——, about twelve years of age, who had not long before suffered from an attack of mumps, followed by pain and enlargement of the abdomen. The whole abdomen, and especially the hypogastrium, was large, hard, and irregular. It was supposed by the mother of the patient that sufficient attention had not been paid to the regular evacuation of the bowels while at school, from which she had recently returned. The catamenia had not appeared, and there were none of the symptoms of puberty present. Active cathartics were given, but the enlargement and hardness of the abdomen continued after the bowels had been thoroughly evacuated. I saw the patient with Mr. Gaskell thrice at short intervals, and formed the opinion that some obscure organic disease, not glandular, existed.

Dr. Merriman was then consulted, and I am indebted to his kindness for the following account of the case from the 22nd December, 1842, till the month of May, 1843:—

"On first seeing this young lady, I was sensible of a fluctuation low in the cavity of the abdomen, and a feeling of tightness within the pelvis, which led me to believe that the pelvic viscera were involved in the disease, and I ordered diuretics as principal remedies. Miss F—— was from time to time brought to my house; and on the last day of her paying me a visit, the opinion I gave of the case was so unfavourable as to induce her parents to wish that Dr. Paris's opinion should be taken. Dr. Paris met me, and a plan of treatment was adopted and acted upon for about a week. Meantime her parents had been urged to consult the late Mr. A. White, who saw her with me January 23rd, 1843, and on this occasion a tumour, evidently ovarian, was distinctly to be seen emerging out of the pelvis. She was now put upon a course of hydriodate of potash, which, together with change of air and more advanced season, appeared to improve her general health. Throughout the month of March her health remained much the same, but the tumour did not diminish, and in April Mr. Aston Key was called in. He continued to give the hydriodate of potash, and had the parts fomented, without much benefit. She was brought to me in the month of May, and, I believe, went to the sea-side."

About the end of October, 1843, nearly a year having elapsed from the time I first saw Miss F—— with Mr. Gaskell, her parents again consulted me respecting her, and as the abdomen was then greatly distended with fluid, I recommended that she should be tapped, and that Mr. Aston Key, under whose care she had been for some months, should be requested to

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perform the operation. This was done on the 2nd of November, and a quantity of dark-coloured, gelatinous fluid, evidently the product of an ovarian sac, was drawn off. As no case of ovarian dropsy at the age of thirteen had ever before come under my observation, and before the appearance of the catamenia, I had been led to conclude that the fluid was contained in the sac of the peritonæum, and that the case was not one of encysted dropsy. After the fluid had been drawn off, the lower part of the abdomen was still hard and irregular, and a solid mass about the size of a hen's egg, was distinctly felt the day after the tapping in the epigastric region.

From the 3rd of November, 1843, to the 7th of February, 1845, I was never consulted by the parents of Miss F——, nor obtained any information respecting the state of her health. On the morning of the 7th of February she was brought to my house by her father and mother. The abdomen was again largely distended with fluid. I was informed by them that they had been induced to consult Dr. F. Bird, and that he had given it as his opinion that their daughter's case was in all respects most favourable for the operation of ovariotomy. They further stated that Dr. Locock had been consulted the day before, and that he considered the case highly favourable for the operation, and urged its immediate performance. It had, in fact, been determined, before they came to me, that the operation should be performed, and they seemed confident that their daughter would speedily be restored to perfect health. Apparently their purpose in calling upon me, was not so much to obtain my sanction to the proceeding as indirectly to reproach me for not having long before recommended or performed an operation which they believed to be so efficacious and devoid of danger. Instead of offering any observations on the propriety of the operation, I took down Vol. xxvii. of the *Medico-Chirurgical Transactions*, and turning to Mr. B. Phillips' Table of "Operations for the Extraction of Ovarian Tumours," begged them to run their eyes along the column of results. In this they saw the word "death" repeated twenty-eight times, thrice three times running, and once four times without any intervening case of "cure" or "recovery." Nothing further was said respecting the operation on that day.

On the 16th of July, 1845, I was requested to meet in consultation, Dr. S. and W. Merriman, Dr. H. Roe and Dr. F. Bird, to consider the propriety of the operation of ovariotomy in this case. I pointed out the necessity of having the patient again tapped, and the condition of the ovarian cyst and tumour, and of all the pelvic and abdominal viscera, carefully determined before any operation was attempted. After some opposition, I succeeded in obtaining the acquiescence of all to this proposal. During the tapping, the canula being obstructed, the fluid ceased to flow, and on inquiring into the cause of this, it was discovered to have arisen from a quantity of fatty matter and long hair. It was at once obvious that the dark-coloured viscid fluid was not escaping from an ordinary ovarian cyst, but from a cyst containing, along with the fluid, long hairs and fatty substance, and probably a jaw-bone and teeth, as in numerous recorded cases of congenital malformation of the ovaria. After the fluid, fat, and long hairs had been drawn off, a large irregular mass remained in the hypogastrium, and the small tumour in the epigastric region was still to be felt. At this consultation "it was the opinion agreed to, that the operation was not immediately necessary, and might with propriety be deferred three or four months." Dr. W. Merriman made this memorandum the same day.

To the best of my recollection I never saw the patient again, and, until about the end of August, 1846, could not learn what had become of her. I was then accidently informed that Miss F—— had died at Ramsgate, but after much trouble I have not succeeded in ascertaining precisely when this took place. The body was, however, brought to London, and a post-mortem examination made by Dr. H. Roe, Dr. F. Bird, and Mr. B. Holt. Mr. Holt did not preserve any notes of the morbid appearances, and does not know the date.

On the 6th of Sept., 1846, Dr. F. Bird very kindly gave me the following description of these, which I took down in writing in his presence, and the same day copied into my journal of cases, from which it is extracted.

"Abdomen greatly enlarged. On opening the integuments, adhesions equal to a space of six inches, the centre where the puncture had been made, from which the adhesions radiated. No other adhesions elsewhere. Slight attachments above to the omentum. A great ovarian sac came into view, connected with the right ovary, involving the whole of it, the pedicle formed by the broad ligament and Fallopian tube, which was eight inches long; the chief vessel was the spermatic; the anterior half of the tumour presented a spherical outline, but posteriorly, nodulated throughout; the sac an inch thick anteriorly, whereas, behind it was extremely thin, like tissue paper; within this a soft vascular mass, which had ulcerated, and this had poured out a great quantity of blood; the sac having given way, hæmorrhage had also taken place into the peritonæum. On laying open the sac, it was multilocular, but one large cyst, with a number of small ones; patches of inflammation on the lining membrane. One large and hard mass existed on the left side, where we felt the hardness traced up on the left side, eight inches long, four wide, and two in thickness; consisted of numerous small condensed cells, having a centre of bone, with hairs—not yet examined."

I obtained permission to examine this mass, by making an incision into it. The structure was that usually termed by pathologists malignant disease of the ovary. The tumour had interspersed throughout its substance numerous long hairs and pieces of bone.*

A case in some respects analogous to the preceding occurred several years ago in the United States of America, in which the operation of ovariotomy was performed, and was followed by a fatal result. I am not aware that any other case resembling this has yet been recorded.

ON THE

USE OF HOT PILLOWS ALONG THE SPINE, IN CASES OF APPROACHING COLLAPSE.

By R. L. Haynes, Esq., F.R.C.S.Eng., & L.S.A.

The profession and public at large will be greatly indebted to you by inserting the following mode of arousing the vital energies of the human frame, in cases of cholera, suspended animation, and other cases of apparent sinking from threatening collapse. I was first led to employ scorching hot pillows placed under the back, renewed every ten minutes, in a case of sudden illness, with the most alarming symptoms of sinking (in a patient recently recovered from puerperal peritonitis), when I began to despair of success, after two hours' use of internal stimuli, fomentations, sinapisms, and the hot-air baths. I then thought that very hot pillows placed under the spine might restore warmth

* Had a full examination of all the parts of the tumour been made, it is probable that teeth would likewise have been discovered.

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to the body, and establish the general circulation of blood, which I was gratified to find occur in half an hour, speedily followed by a free perspiration. The patient got quite well. I have repeatedly, since, used the same mode of arousing the circulation, and with similar success; and I doubt not that many lives may be placed in security where alarming syncope or collapse threatens. The readiness and simplicity of the method, coupled with the powerful effect on the spinal axis and heart's action, will, I hope, induce many practitioners to test the plan; and my reward will be great if their success should establish the remedy, as one powerful (as it is simple and safe) where there is a *vis vitæ* in the patient to assist.

ALPHABETICAL NOTICES OF SUBJECTS CONNECTED WITH THE TREATMENT OF DYSPEPSIA.

By Robert Dick, M.D.

Concluded from Oct. *No. p.* 288.

Valeriana Officinalis.—In this country valerian has hardly any other reputation than that of an anti-spasmodic. On the Continent and more especially in France, it gets credit for other virtues. It is even considered by some as a specific in epilepsy—an estimate of it more flattering than well-founded. In truth, even as an anti-spasmodic, it suits only the less grave and purely functional nervous derangements, such as hysteria; and in such cases it acts best when combined with ether or ammonia. Combined with the metallic salts, its range of action is extended to cases of a more chronic kind. Thus the valerianate of zinc is highly useful in a variety of neuralgic disorders. In France an extract is employed. A chemist in London, who attempted this preparation at my request, finds it easily made. My object was, to combine it with bismuth in gastrodynia.

Wine.—Few, indeed, are the cases of dyspeptic derangement in which the use of wine is indicated. On the other hand, it sometimes happens that abnormal states of the *prima viæ* present obstacles to the use of wine when it is constitutionally required; yet such cases are not frequent, for the constitutional disorder usually, by a sort of vicarious action, annihilates the irritability of the stomach, duodenum, &c.

For those free from the arthritic and rheumatic diathesis, and whose digestive organs are healthy, perhaps the best of all wines are good hock and claret. For those, however, whose digestion is feeble and disturbed by lactic acid in excess, as is the case with many, the more brandied wines, particularly sherry, are the most eligible.

The gross adulterations practised on almost all wines, very much lessen the advantage to be derived from either their dietetic or medicinal employment. The good effects of a salutary stimulus are often more than neutralized by the derangement to primary and secondary assimilation caused by the excessive admixture of alcohol, or by the tannin, colouring matters, &c., added to give a deceptive strength and flavour to the liquor.

In his day, Dr. Darwin preferred well-made British wines to the foreign. We have little doubt that it would be easy to manufacture a home article not much inferior in agreeableness to much that is imported, and without those interpolations which prevent persons aware of them from using foreign liquors without feelings of uncertainty or disgust.

Zinc.—The oxide and sulphate of zinc are the only two preparations requiring notice here. The former is a mild tonic and anti-spasmodic; the latter is an astringent tonic, and, in larger doses, an energetic emetic.

I have thus brought these papers to a close, and take this opportunity of expressing my gratification at the intimations which I have from time to time received from my professional brethren, of their satisfaction with my slight contributions.

PORTRAITS AND BIOGRAPHIES OF DISTINGUISHED PRACTITIONERS.

The Biography of

PROFESSOR FERGUSSON, F.R.S.,

SURGEON TO KING'S COLLEGE HOSPITAL, AND SURGEON TO PRINCE ALBERT.

There are two kinds of Biography, of especial interest to all; the one, the history of men of great failures; the other, the history of men of great successes. Each can furnish its lesson of instruction. The clear observer may sift out how much of merit or demerit has made or marred the fortunes of candidates for the world's prizes. We can apply to our own individual experience, in the way of caution or encouragement, the causes and the accidents both of failure and success. In the instance at present under our pen, we have to study the union of rare good fortune with singular desert.

William Fergusson is descended from a good family in the county of Dumfries, and was born at Prestonpans in East Lothian, on the 20th of March, 1808, so that he is now forty-three years of age. He received his education first at the Grammar School of Lochmaben, the ancient royal burgh in Dumfriesshire, where his paternal ancestors had held property for many generations, and at this period was under the special charge of his uncle Colonel Fergusson, late commandant of the Royal Marines, Plymouth, who has always evinced a lively interest in the welfare of his then youthful namesake; then at the Edinburgh High School, and subsequently at the University of Edinburgh. His father very early wished him to follow the medical profession, but he showed signs of preferring the law, and when about fifteen years old was placed with a relative high in the legal profession. He soon, however, became tired of law and legal matters, from the hopelessness of making that rapid figure, of which, even at this age, his eager spirit was desirous. He fell back upon his father's choice, became a pupil of Knox, and entered upon his studies with zeal and energy. Few students have ever proceeded in the arduous course of medical study with such rapidity and success. He began when he was seventeen years of age, and opened his first medical book in November, 1825. In April, 1828, when only twenty years of age, after two years and five months of study, he became a licentiate of the College of Surgeons of Edinburgh! He early devoted himself to anatomy and surgery, and in the second year of his studentship not only read, but made himself familiar with, all the classical surgical writers of this country. In 1829, he became a pupil of John Turner, the professor of surgery in the College of Surgeons of Edinburgh. In 1829, he passed his examination for the fellowship of the College of Surgeons, when only twenty-one years old. He must thus early have had a true ambition to succeed in the highest walks of his profession, for at this age he took the few debts he had incurred during his studentship upon himself, and determined to pay his own way for the future. He had before this entertained the idea of going out to Greenland in a whaler, to obtain the necessary funds to complete his education, and set himself up in the world. But this was found to

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be unnecessary. The fee for the fellowship was £300, a large sum for him to raise in those times. He succeeded, after some difficulty, in borrowing the money, by insuring his life. This plan cost him altogether about £500, but he afterwards paid off the debt, and still holds the policy upon his life. He was now taken into a kind of partnership by Knox, and began to lecture with success upon anatomy and operative surgery. This was the commencement of his fortune. Knox had a great ambition to turn out a surgeon from his school who should rival and equal Liston, then the great star in Edinburgh. Besides other talents, young Fergusson had exhibited great mechanical talents. The first thing which specially attracted the attention of Knox, was a handsome mahogany dissecting case, brass bound and fitted up in the most workman-like style, made entirely by himself. This gave the master the idea that he had found the material for a first-rate surgeon, and he set to work to make him one, a task in which he was well seconded by the ability and zeal of his pupil. Afterwards, as a surgeon, the handicraft of the mechanic was still kept up, and we have seen a lithotrite, embodying an ingenious improvement, made by his own hand, and also the first oaken model of the application of the rack and pinion, to the handle of the lithotrite now in general use. In 1831, he delivered his first systematic course of surgery to a class of nearly sixty pupils. Reputation and practice now came in upon him, and he became assured of a solid success in Edinburgh. He continued to lecture up to 1840, and altogether numbered 500 pupils to his surgical courses in that city. In 1833, he married a lady who possessed great personal accomplishments, and a fortune, which was subsequently increased by her accession to an estate in Peeblesshire, on the decease of her only brother. He was now twenty-five years of age, with a high reputation as an anatomical surgeon, and on the removal of Liston to London in 1835, divided the surgical chieftancy of Edinburgh with Mr. Syme. In 1831, he had been elected surgeon to the Royal Public Dispensary of Edinburgh; and in 1836, he was elected surgeon to the Royal Infirmary, an appointment which gave the highest opportunities which Edinburgh could afford.

Now came the most important event of his professional life. The authorities of King's College had determined to have an hospital in connexion with their school, which was already in a very flourishing condition. Mr. Arnott was then the professor of surgery at the College, but he also held the office of surgeon to the Middlesex Hospital. It was considered necessary that the professor of surgery in the College should also hold the post of surgeon at the proposed King's College Hospital. This latter, Mr. Arnott declined, as it would have necessitated his resignation at the Middlesex. It became known, therefore, that the appointment of Professor of Surgery and Surgeon to King's College would be vacant, and Mr. Fergusson wisely expressed his desire to become a candidate. At this time, he had only a slight acquaintance with one of the professors, so that his appointment took place solely on public grounds. He was elected in the spring of 1840, and commenced his duties in May of the same year.

Sir Charles Bell took the occasion to write to Sir Benjamin Brodie, and other distinguished men in London, introducing the new professor in the most flattering terms. Before his final departure from Edinburgh his personal admirers and friends publicly presented him with a valuable piece of plate, and the students gave him a handsome silver cup as a mark of their love and estimation. We now have him launched upon a new scene of exertion, and as may be supposed, he has never repented of this step. He exchanged the limited field of Edinburgh for the almost boundless one of this metropolis. He became again the public competitor of Liston, and there were soon occasions on which comparisons were made not altogether unfavourable to the new comer. Gradually but steadily he made his way in public estimation, giving constant evidence that his heart was entirely in his profession, improving every opportunity of advance either in reputation or practice, and never failing to impart the conviction that a fund of power and energy yet remained for new emergencies and occasions for exertion.

When he came to London he forthwith presented himself for examination at the College of Surgeons, and was received at the examining-tables in the kindest manner, by Mr. Guthrie, Mr. Vincent, Sir Astley Cooper, and Sir Benjamin Brodie. He was made an honorary fellow, upon the occasion of the new Charter of 1843, but to the surprise of his friends his name was not included in the first batch of fellows. This, it was afterwards explained, was rendered necessary by the strict adhesion to the dates of membership, and the system of rotation, by the Council. This circumstance, under the present arrangements of the College, places Mr. Fergusson low on the list of those who are eligible to the Council. By the contemplated reform of the Charter, this will be altered, and we have then no doubt the suffrages of the Fellows will soon place him upon the Council. He was elected a fellow of the Royal Society of London, as one of the first list under the new regulations respecting the selection and election of fellows, and took this occasion to resign the fellowship of the Royal Society of Edinburgh. After the death of Liston he was elected consulting-surgeon to the Hospital for Consumption, at Brompton, and surgeon to the Scottish Hospital. Upon the death of Mr. Aston Key he was appointed surgeon in ordinary to H.R.H. Prince Albert, under the most flattering circumstances. It was thought that a St. George's surgeon would undoubtedly have received this post, or that it would have been conferred on one of the elder surgeons of the metropolis. It is understood that the highest personage in the realm expressed an opinion that a young surgeon would be preferred. Two names were ultimately placed before the Court, and Mr. Fergusson was selected on the ground of his operative reputation. His competitor, however, defeated him when both were candidates for the examinership in surgery at the University of London.

In London, we believe without exception, the subject of our sketch is on good terms with all his contemporaries, and he may boast of being a favourite with all classes of the profession. He owes much to himself, much to the living, but he also owes much to the dead. Since Mr. Fergusson's migration from the Scottish metropolis, the king of terrors has been busy with the surgical heroes of this age. We question if any other decade could embrace the death or retirement of so many eminent surgeons in London, as that from 1840 to 1850. Just as Mr. Fergusson came amongst us, Sir Astley Cooper died, to the last preserving a great name. Then Mr. Walker, whose reputation at St. George's gave the warranty, that had he lived he would now have held a fine position, died on the threshold of extensive practice. Mr. Tyrrell, of St. Thomas's, fell dead as he was about buying an estate in an auction-room. The death of Mr. Anthony White, of the Westminster, made another surgical void. Mr. Andrews, of the London Hospital, died within the same period, full of years and honours. To these may be added the name of Mr. Honoratus Leigh Thomas, of Leicester-square.

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Mr. Vincent, of St. Bartholomew's, a man of great surgical attainments, but who had never taken his proper rank, retired from the field. Still earlier than Mr. Vincent, Mr. Babington, of St. George's, had done the same thing; and Mr. Herbert Mayo, of the Middlesex Hospital and King's College, after promising much in anatomy, physiology, and surgery, has set his sun in hydropathic practice at Boppard, on the Rhine. Poor Morton, with large and kindly talents, which won him as many friends as he had acquaintances, fell by his own hand. His father-in-law, Samuel Cooper, the Nestor of modern surgery, had previously succumbed to age and infirmities, aggravated by the rancours of University College. Mr. Calloway, of Guy's Hospital, died in the full flush of City practice. Mr. Morgan, of Guy's Hospital, too, died at an early age for a surgeon. The list is quite Homeric, but we have not yet done. It is hardly necessary to revert to the death of Liston, whose career had preceded that of Mr. Fergusson, and who had run much the same course in removing, with an already great reputation, and while still young, from Edinburgh to London. Nor need we do more than refer to the still more sudden and untimely death of Mr. Aston Key, another of the great surgeons matured by Guy's, and who, after the death of Liston, was thought to hold the palm of surgery unquestioned against all comers. All these men were in the field with Mr. Fergusson; but Mr. Liston and Mr. Aston Key were, in an honourable sense, his peculiar and gigantic opponents. They had the great advantage of preceding him in their hold upon public and professional favour. What Mr. Fergusson would have been had his great rival, Liston, and his subsequent competitor, Aston Key, both lived, it is impossible to say. He would doubtless have been a great and successful surgeon, but he could not have taken that lead in practice and professional emoluments, which he has now gained. Nor must we omit to mention another matter of some account in this list of deaths and retirements. Mr. Syme, then holding the sole surgical away in Edinburgh, came, as is well known, to London, with great hopes and expectations, at the death of Mr. Liston. He took an expensive house, and seemed to fix himself down immovably, and as it appeared, in opposition to the subject of our memoir. His speedy retreat took all surgical London by surprise. We very shrewdly question, however, if Mr. Syme would have fallen back upon Edinburgh and its vacant clinical chair with such precipitation, could he have foreseen the speedy death of Mr. Aston Key; and if we may judge of his constant ill-temper toward everything and person surgical in London, his sudden advance and sudden retreat are sore subjects with him even now. It will be seen then, that an extraordinary concatenation of circumstances and good fortune, such as can seldom, if ever, befal an individual, have concurred to give Mr. Fergusson a position which scarcely any surgeon of modern times has attained to at an equally early age. He is, in fact, younger than many of the young men who are now waiting, and obliged, whatever their talents, to wait, for the retirement of their seniors.

At the time of his leaving Edinburgh, his practice amounted to £600 a year. The first year after settling in London produced from practice something less than £100. This was of course a nervous time, and the most trying period of his life. He had taken a good house in Dover-street, and, including the receipts from his professorship at King's College, his expenditure exceeded his income by about £500 a year. The discrepancy, however, became less and less, and in 1844 the balance was on the income side of the account. In 1847 he removed to his present commodious residence, in George-street, Hanover-square. The year after Mr. Liston's death his practice increased more than £1000; and in 1849, the year of Mr. Aston Key's death, it rose still more. Last year it came close to £6000, and the tendency to increase no doubt continues. We believe there is no one who knows Professor Fergusson will grudge him his splendid success, or say that it has not been well merited. For the future he has only to take care that no spots shall sully his reputation, and with health and life his fortune is secure.

In his early career, Mr. Fergusson paid great attention to the operation for lithotrity. He did this at a time when the operation was practised by few surgeons in this country. Here he may be said to have laid the earliest foundation of his great reputation as a surgeon. Most of us remember the rude instruments at first used for crushing calculi in the bladder, and the mischiefs which resulted from concussing with the hammer. It was the subject of our memoir who introduced the rack and pinion now very generally used in lithotrity instruments, and which renders them perfect for the purposes to which they are intended. Lithotomy and lithotrity have always been strong points in his practice, and he has now operated upon upwards of one hundred cases—an experience of which few surgeons since the days of Cheselden could have boasted at the age of forty. When only twenty-three, he successfully ligatured the subclavian artery, an operation which had previously only been performed twice in Scotland. He is, we believe, the only surgeon in this country who has excised the entire scapula. He also revived the operation for the resection of the upper part of the femur, an operation performed fifteen or twenty years ago by Anthony White, on a hint given by the celebrated Charles White of Manchester in the middle of the last century, but which, after its first performance, had fallen into neglect. In the hands of Mr. Fergusson this operation has been remarkably successful, though certain surgical enthusiasts have undoubtedly performed it in improper cases and thus contributed to damage the operation itself. To Mr. Fergusson's operation for cleft palate, staphylorraphy, or velo-synthesis, we scarcely need refer. It is a beautiful application of anatomy and physiology to the surgical relief of one of the most distressing malformations which occur in the human subject. In the April number of the *British and Foreign Medico-Chirurgical Review* for the present year, we find it spoken of as "one of the most convincing proofs of the benefit of minute anatomical research to the practical surgeon, and by far the most important improvement in plastic surgery which has been made by any British surgeon." In this high estimate we entirely coincide. If he had done nothing else of importance in surgery, this operation would be sufficient to place his name high amongst scientific surgeons, founded, as we have already said, upon a strict anatomical and physiological basis. It is well known that the old operation of staphylorraphy was very unsatisfactory; the failures were so frequent, that some surgeons hesitated to perform the operation, and cleft palate seemed on the point of being handed over to surgeon mechanists and elocutionists. Mr. Fergusson carefully inquired into the causes of failure; and after having minutely dissected a specimen of the palate in its cleft condition, he discovered that the difficulty of healing the fissure depended in a great measure upon the contraction of the levator-palati, and palato-pharyngeus muscles. These muscles he proposed to divide, and the operation has now been repeatedly performed by himself, and by a great many eminent surgeons, with extraordinary success.

To Mr. Fergusson also, we owe the invention of

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the speculum uteri in most general use. After a series of trials he succeeded in silvering glass tubes, and subsequently covering them with caoutchouc, an arrangement which makes this speculum superior in some respects to all others which have been contrived. Of another instrument, formerly in great request, the gorget, he has a wholesome horror. We have said above, that to him we must attribute the present perfection of lithotrity instruments. It is curious that in the work of Civiale published in 1847, Fergusson's lithotrite is copied to the line from a wood cut in the Practical Surgery; it is termed "plus simple," but it is not acknowledged.

Mr. Fergusson is well read in the literature of surgery, ancient and modern. At an early period of his career, he had the wisdom to set himself down to the study of the English and French classics of the last century. He always aimed at keeping his anatomical and surgical knowledge well together. He worked hard in the anatomical school of Edinburgh, first as the pupil, and afterwards as the coadjutor of Knox, a man who, whatever were his faults, was undoubtedly a great anatomist and remarkable for inspiring those about him with enthusiasm. At three-and twenty he was a splendid anatomist. The faculties of his mind peculiarly qualified him for the retention of exact anatomical knowledge. Some men never forget anything they have read, others that they have heard, but Mr. Fergusson does not forget anything he has seen and touched. He never forgets a physiognomy, a handwriting, or anything in which form and relative position are concerned. This gives him great power in estimating the advance or diminution of surgical disease in any part of the body which can be brought well under the cognizance of the senses, though he may only see the case at long intervals. As the result of a larger experience than has fallen to the lot of most men at his age, he is familiar with every form of surgical pathology. Although he shines most as an operator, his powers of diagnosis are great, when he chooses to exert them, or the case is sufficiently difficult to stimulate him to the exertion of his powers. We have in such cases, after mature examination and thought, known him form an opinion which has proved correct, when every one about him has been wrong. We could call to mind cases of this kind, especially in diseases of the upper jaw, and diseases of bones and joints.

Unquestionably, however, it is as an operator that Mr. Fergusson shines with the greatest brilliancy. An admirer of the illustrious Liston, though in after-life jealousies sprang up between them, he followed him closely in his principles and modes of operation. Mr. Fergusson's characteristic as an operator is simplicity. His instruments are always few and uncomplicated. Any one who has gone into the operating theatre at King's College, or has seen him operate in a private room, must have been struck by the perfect method with which his work is conducted. Everything is done in a quiet and orderly manner, yet the result is obtained with the most admirable activity. No display, no unnecessary flourish of instruments, are observed; and the coolness with which he sets about the most terrible surgical proceedings cannot fail to give both patient and lookers-on the most favourable impression. In all that relates to operations or surgical manipulations, he is a strict disciplinarian. Those about him are expected and obliged to conform themselves entirely to his will. He almost invariably preserves perfect coolness and firmness, even in the most prolonged and difficult cases, and but the only few occasions on which we have seen him lose temper, have been when some careless or not very nimble dresser has had some little office necessary to the proceedings, or an instrument has been handed to him unfit for its work. We remember an instance, in which a pair of clumsy forceps were given him, which so discomposed him, that, in the middle of an operation, he put one of the blades between his teeth, and with his unemployed hand snapped the unlucky instrument in two, and threw it on the ground. Active and careful himself, he cannot tolerate the want of these qualities in those around him. He thinks nothing too minute about an operation to have all his attention. Some celebrated surgeons, if a limb has been amputated, or a tumour removed, leave the rest of the proceedings, such as tying vessels and dressing the wound, to their assistants. Mr. Fergusson does all this himself, and never sends away a patient until all bleeding vessels are taken up, and the dressings applied by his own hand. In these times no man can pretend to excel in surgery without first excelling in anatomy; for operative surgery is but living dissection, with a large and noble purpose in view. Liston, it is pretty well known, had his periodical dissections of the dead body; but our present hero was so thorough an anatomist at the beginning of his surgical career, and has a mind so fitted for anatomical retention, that after twenty years of practice he has not yet had occasion to go back to dissections to refresh his knowledge.

One of the characteristics of our professor is his love of conservative surgery. He will never amputate an inch more of a limb than is necessary, and if he can spare a member by excising a diseased bone, or removing a diseased joint, it is his pride to do so. In this department of operative surgery he shines perhaps more than in any other. One of his favourite instruments is the cutting pliers, as bone-surgery is a favourite department in his practice. Probably he has done more with this instrument in mastering osseous disease than even Liston himself. We have heard him say that he hates to cut off a limb more than any other operation. The feeling of the surgeon artist must ever be strongly against such mutilations of the human form divine. Perhaps his dislike to this species of operation, and his trust in the powers of Nature to obviate their necessity, is carried to a fault. Thus we have known him, in more than one case of that terrible accident, compound fracture of the thigh bone, into the knee joint, refuse to amputate, because, as he remarked, "he would prefer the patient dying from the accident rather than from his interference."

We have spoken of Mr. Fergusson's mechanical ingenuity. He has shown that he possesses this qualification, as must every good surgeon, in no ordinary degree. But he has taken care to hold this valuable auxiliary in due subordination to higher things. He has not devoted himself exclusively to attempts to impart ingenuity and adaptativeness to mere instruments: his aim has been to keep these as simple as possible, preferring to make his own wrist perform the work of instrumental dexterity. His pectoral limbs are as fine a development as an Owen could desire. Facility and strength of hand have been his ambition, rather than mechanical ingenuity. His operations are marked by grace, coolness, and celerity; but for these qualities he depends not so much upon the instrument in the hand, as upon the hand itself. The greatest mechanical power in surgery undoubtedly resides in that wonderful octave of irregular bones comprising the carpus. It is these, from scaphoid to uniform, which, under the play of brain, nerve, and muscle, produce the harmonious results of modern chirurgery.

Mr. Fergusson has not been a voluminous writer, according to the meaning of formal authorship. With

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the exception of an essay on Lithotrity, published in the *Edinburgh Medical and Surgical Journal*, a paper on Cleft Palate, read before the Medical and Chirurgical Society, and published in the *Transactions* for 1845, and a paper on the same subject in the *London Journal of Medicine* for January, 1849, several Introductory Lectures delivered at King's College, with a few reviews and minor papers, the work on Practical Surgery is all which he has presented to the public. But the history of this work shows that but for a constant professional occupation, he might have been successful as a voluminous author. It is, as most of our readers know, a compact volume of small print, containing equal matter with many larger and more pretentious tomes. Its composition was begun in Edinburgh in the spring of 1829, but only a small part of it was then written; the rest was done in London in the spring and summer of 1842. Altogether the writing, designing of wood-cuts, and corrections for the press, occupied about seven, or at most eight months of constant labour! It is not often that a practised writer has completed an equal amount of labour in so short a space of time. The book was eminently successful, and with a sale, in its two editions, reaching to between four and five thousand copies, and a large reprint in America, where its excellences are highly estimated, it must have contributed a good quota to the surgical reputation of its author. Mr. Fergusson has himself termed it one of the great pillars of his professional fame. But though he has not written voluminously, and has not contributed directly, we believe, to the weekly press at all, no man has had his hospital work more minutely chronicled. During the last ten years no surgeon has had so many of his cases recorded in THE LANCET. It is, however, been strictly a record of his public career, and has been unattended by any personal or professional praise.

His friendship with the late Dr. John Reid is one of the most interesting points in the history of Mr. Fergusson, and the close of it is too honourable to the latter to be omitted. In the year 1847 that lamented physician and physiologist was attacked with cancer of the tongue. In the spring of 1848 he came to London, and consulted Sir B. Brodie and Mr. Syme, and also called on his old friend, Mr. Fergusson. Mr. Syme was decidedly against any operation, and Sir B. Brodie did not recommend the removal of the diseased part. Therapeutics were to be relied on for some time, but Mr. Fergusson formed his opinion that it might be removed with a hope of a successful result. In the autumn of the same year the disease had progressed considerably. Twice his Edinburgh friends went to St. Andrew's to operate, but when they arrived refused to do so. Mr. Fergusson now wrote to ask him to come to London, but he was unable to undertake the journey. Mr. Fergusson upon this, determined to go to his friend, and in August he removed the greater part of the tongue. The recovery from the operation was speedy, and the relief from pain perfect and to all appearance permanent, but the disease had rather too firm a hold. In a few months it returned, and in November and January following, other considerable operations were performed by Messrs. Duncan and Goodsir. Dr. John Reid died on the 30th of April, 1849; but he never ceased to express his gratitude to his friend for the operation, which, though ultimately unsuccessful, gave him several months of comparative freedom from pain, and time for a Christian preparation for the approach of death. Those who know Mr. Fergusson's kindness of heart need not be told that the operation upon his friend was only performed from a sense of sacred duty, which called upon him to put by his passive, in exchange for the active, sympathy of professional help.

His behaviour towards his hospital patients is beyond all praise. No haste, no ungentleness, no want of sympathy, no display, in his intercourse with the poorest. Like many other great physicians and surgeons, he evidently feels that his hospital practice realizes the pleasures of the practice of our art more fully than any other professional occupation. His conduct towards his students is such as to gain their esteem and love. Yet when severity is necessary, he can be most severe. If a pupil or assistant should offend him, or fall short of his duty, and if he knows that the offender is one who is likely to be benefitted by good counsel, instead of hastily rebuking him or remonstrating with him before others, he will draw him aside and administer the necessary admonition. To his old pupils he is especially kind, aiding them in their difficult cases, and rejoicing in their operative or professional triumphs. It is a matter of great pride with him, that he has already turned out upwards of one thousand surgeons as a teacher. Altogether he is, without doubt, one of the most popular teachers with his pupils to be found in London.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, et dissection usshistorias, tum aliorum proprias, colligere habereque inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Præmium.

LONDON HOSPITAL.
Cases of Amputation at the Ankle-joint.
(Under the care of Mr. CRITCHETT.)

IN a recent "Mirror," we presented to our readers a series of cases where amputation at the ankle-joint had been performed by Mr. Fergusson, at King's College Hospital. We should, at that period, have been happy to group together all the cases of such operation which had come under our notice, so as to give the report a synthetic interest: but the wish of remaining within the prescribed limits precluded such a course. We beg, however, this day to offer a completion of our former report, by adducing some cases which have been under the care of Mr. Critchett.

From what we stated a little time ago, and indeed from the facts which we have had to bring forward, it will be perceived that in diseases or injuries of the tarsal or metatarsal bones, the removal of the foot at the ankle-joint does not always yield a good and serviceable stump. Like all surgical operations, the one under consideration is liable to fail, either from causes having their origin in the patient himself, or in the manner in which the operation is performed and the stump dressed.*

There can, however, be no doubt that Mr. Syme's method is a very great improvement upon the old mode of amputating half up the leg, or just below the knee-joint. For patients in easy circumstances this method is extremely well-calculated; because such persons may procure an artificial foot; and these substitutes are now-a-days made with such perfection.

* We lately noticed a case where the operation was performed in the usual manner, and with every prospect of success; the flap was, however, by some inadvertence of the dresser, subjected to a certain amount of pressure, which caused it to slough away almost completely.

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that the loss of so important a part may successfully be concealed. And even those who cannot take advantage of the surgical machinist's skill, have still the faculty of wearing a shoe made especially for their case, which will materially aid progression, and greatly diminish the discomfort.

Some surgeons have attempted the introduction of slight modifications in the steps of the operation as laid down by Mr. Syme. Such attempts have been made in France, but these changes were in fact no improvement, and the original method, as frequently carried out in this country, is still found very convenient and effectual. It would appear, from instances which we have seen, that it is of no small importance that the principal vessels of the part should be carefully spared, as the vitality of the thick flap must depend on the more or less abundant supply of arterial blood. Mr. Critchett's cases run as follows:—

Case 1.—Anne O——, aged forty-three, came under the care of Mr. Critchett in July, 1848; she was then suffering from extensive disease of the right tarsal bones. There was considerable enlargement of the foot, with several deep sinuses, which could be traced down to the bone; and occasional severe attacks of pain and inflammation, caused by the formation of fresh abscesses. The disease having existed for above six years, and the health being much impaired by the constant irritation and drain upon the system, Mr. Critchett took the patient into the London Hospital, in September of the same year, for the purpose of having the foot removed at the ankle-joint.

She was placed under the influence of ether, which was the anæsthetic then in use, and the operation was performed in the usual manner. The malleoli were removed with strong bone-forceps, the smooth cartilaginous surface on the lower part of the tibia being left. Three vessels were tied, and very little blood was lost; the heel flap was then brought into contact with the anterior incision, fixed there by means of four sutures, and strips of wet lint were then applied.

Very little union occurred by the first intention, and for some time there was a tendency to bagging of matter and receding of the lower flap. Both these circumstances were, however, much counteracted by bringing strips of adhesive plaster from behind forwards with some force. There was never the least diminution of temperature or tendency to sloughing in any part of the stump.

A marked improvement in general health may be almost dated from the operation, and in six weeks she was able to leave the hospital, the stump being healed, with the exception of a sinus on each side. These closed a few weeks after the patient was discharged, and nine months after the operation there was a firm, round stump, upon which she could bear her entire weight, without the least pain. The patient had not been able to procure an artificial foot, but she managed to walk by fixing the stump in a boot partly filled with wadding. Her health has remained remarkably good, and her appearance is much improved.

Case 2.—The patient is a young lady, aged seventeen, residing near Cambridge, who was first brought to Mr. Critchett in July, 1849. Her general aspect was highly strumous, her circulation very feeble, and her general powers evidently giving way. She was suffering from extensive disease of the tarsus, the foot was much enlarged, there were several deep sinuses, and fresh abscesses were forming at intervals, these collections of matter being attended with a considerable amount of suffering and constitutional irritation. The disease had been gradually developing during about two years and a half; there was also some slight disease of one wrist, and a chronic abscess in the region of the right scapula, of some months' standing.

A long residence at the sea-side, and other suitable remedies, having been tried in vain, and both the local disease and the constitutional debility becoming daily worse, Mr. Critchett recommended amputation of the foot; and to strengthen this opinion he had the valuable counsel of Sir. B. Brodie, who regarded the case as most unfavourable, but advised an operation as the only remaining chance. After some difficulty, the consent of the parents and of the patient was obtained, on the condition that the foot only should be removed. We should mention that the sinuses not only existed about the foot, but one or two extended to both malleoli, giving the impression, to a superficial observer, that both tibia and fibula were diseased.

On the 30th of August, 1849, the patient being placed under the influence of chloroform by Dr. Parker, Mr. Critchett removed the foot precisely in the same manner as in the above-mentioned case; the subsequent treatment was similar, and the patient made a slow but satisfactory recovery. Her general health rapidly improved from the first week after the operation and has remained exceedingly good ever since; she has grown robust and ruddy, and can hardly be recognised as the same individual.

Early in November—that is, two months after the removal of the foot—the patient was sufficiently recovered to go to the sea-side, the stump, which was a very good one, being healed, with the exception of two or three sinuses at the malleoli, which continued to discharge slightly for many months.

In the following May, eight months after the operation, being able to bear her entire weight on the end of the stump without the least pain, the young patient returned to London to have an artificial foot made, which was very ingeniously contrived for her by Mr. Gray, of Cork-street.

Mr. Critchett has seen her again within the last few months, and finds that she is able to walk some miles without pain or fatigue, and her movements are so regular and even, that a cursory observer would not perceive any lameness, and it may be added that the patient's father has stated that in the district where she resides, people are quite unaware that she has lost her foot.

Mr. Critchett, in commenting upon these cases, considered them very interesting, as bearing upon a question still *sub judice* among many of our leading English surgeons, and calculated to suggest a few practical considerations.

He first would notice, in passing, the hopeless character of strumous disease, when it invades the tarsal bones, this character being accounted for by the number and extent of the articular surfaces, and the readiness with which small portions of dead bone may get locked in, as it were, among the osseous structures. Sir. B. Brodie dwelt upon this circumstance, as the results of his long experience, and these cases and others which Mr. Critchett had met with, fully confirmed this opinion.

The two cases just reported also illustrate strongly a fact of almost daily observation—viz., the extent to which a local disease reacts unfavourably upon the constitutional diathesis to which it chiefly owed its origin; and the rapidity with which the general health becomes restored when the source of irritation is removed.

As regards the operation itself, Mr. Critchett considered it as among the greatest improvements of modern surgery, and as giving a far better result than any *à priori* reasoning would induce us to expect. The objections to the proceedings are: first, that it is necessarily a somewhat tedious and difficult piece of dissection, the parts being hard and the surface of

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the bone uneven; secondly, that there is some risk of the heel flap sloughing, either entirely or in part; and thirdly, that the process of healing is very slow.

On the other hand, the advantages are: first, that a large and valuable portion of the lower limb is saved by it, thereby diminishing risk at the time of the operation, and very much benefiting the condition of the patient afterwards; secondly, a most important point is gained by covering the ends of the bones by a *part accustomed to pressure, and especially adapted by its structure to bear it*—viz, the thick cuticle and condensed fat of the heel; and lastly the preservation of such a leverage and such a power of bearing the weight of the entire body on the end of the stump. (a result, as Mr. Critchett thought, unattained by any other amputation,) that, with a proper mechanical contrivance the patient walks very nearly as well as with his healthy limb.

As regards the best method of performing the operation: the primary consideration is to dissect off the soft parts *close upon the bone*, so as to save all the vessels, and thus assist the vitality of the large heel flap. In making this flap, after carrying the stirrup-like incision under the foot, from the extremity of one malleolus to the other, down upon the calcis, it should be dissected back only as far as the tuberosity, when it becomes difficult; the remainder of the operation is more readily accomplished from above. After the ankle-joint is opened, the tendo-Achillis is easily divided, and then, by depressing the foot, the remainder of the calcis is readily separated from the surrounding parts; the projecting malleoli are easily removed with ordinary bone forceps, and the operation is complete.

Mr. Critchett does not advise the removal of the cartilaginous surface of the tibia; it is adapted for pressure. He has found that parts heal very well over articular surfaces, and believes that, when ordinary care is taken in this operation, the flap very rarely sloughs.

In a case in which his colleague, Mr. Ward, performed this operation with great dexterity, though the patient sunk from age, debility, years of previous suffering, and workhouse fare, the stump preserved its warmth and vitality to the last. In the after-treatment it is very important that no pressure be made upon the flap; three or four sutures and slips of wet lint are the best modes of keeping the parts together. A few weeks after the operation, when there is a tendency in the flap to recede and the matter bags, some strips of strapping, brought from behind forwards, are very useful.

We look upon Mr. Critchett's cases as especially valuable. The number of years which has elapsed since the operations afford an excellent opportunity of judging of the ultimate results of an amputation which is daily gaining ground amongst surgeons.

MIDDLESEX HOSPITAL.

Lupus.

(Under the care of Mr. De Morgan.)

When a patient presents himself before a surgeon with caries and necrosis of the bones entering into the formation of the nose, accompanied by extensive ulceration and loss of substance of the soft parts, it is not always very easy to determine whether the disease which has caused the sad disfigurement is syphilis or lupus. We do not mention this merely because this difficulty may naturally be suspected, from the pretty similar effects of the two affections, but because we have lately seen cases of destruction of the nose, in different hospitals, which were well calculated to exercise the surgeon's diagnostic acumen.

In the last case of lupus which we mentioned in the "Mirror," the diagnosis was comparatively easy; the patient, in fact, was of an age in which the syphilitic taint might be put out of the question, the boy being evidently attacked with scrofulous lupus. But even here syphilis *may* have had a hand in the mischief, for, according to Ricord, syphilitic cachexia will lay the foundation of scrofula; and this scrofulous habit being inherited by the progeny, may, under unfavourable circumstances, become aggravated and be followed by some of the worst manifestations of the disease.

With the patient whose case we have this day to relate, the circumstances were different, and syphilis might, as far as age is concerned, be supposed to have lain at the root of the evil. Yet it is certainly somewhat difficult, where the history is rather obscure and incomplete, and where the patient, from the length of time elapsed, forgets a great many circumstances of his case, to collect such a chain of symptoms and evidence as to form a trustworthy diagnosis. And, nevertheless, how necessary it is that the treatment should be based on accurate diagnosis.

But when the history of the case is not clear, we have at least the rise and progress of the ulceration and caries to guide us. Let us hear what Cazenave and Schedel say on this head: "When these two affections (syphilis and lupus) are manifested by a tubercular eruption, without ulceration, the diagnosis is at times difficult. The syphilitic tubercles are, however, more rounded, larger, they present a copper colour, they are not marked by any exfoliation, and tend much less to the ulcerating process than those of lupus. . . . The syphilitic tubercles which spring up in the face are confined to adults, whilst lupus mostly attacks young people; and the ulcerations which follow the syphilitic tubercles, differ in a marked manner from those of lupus. With syphilis the ulceration is deep, the margins are thick, of a copper colour, and abrupt; whilst with lupus the colour is dark-red, and the ulcerating process seems to invade only the skin. When lupus destroys in depth, it becomes very like syphilis, especially where the nose suffers complete destruction, but here the mode of destruction helps to distinguish the two affections. In lupus the skin suffers first, the cartilages and bones are attacked subsequently, and sometimes after a pretty long time. In syphilis, on the contrary, the bones are first affected, and the skin becomes ulcerated only when caries and necrosis are fully established."

Cazenave and Schedel mention, however, besides these distinctions, that concomitant symptoms, such as pains in the bones, exostosis, iritis, and ulcerations in the pharynx or the velum, will mainly contribute in establishing the syphilitic nature of the disease.

These rules are founded upon the comparative observation of facts, but they are of little assistance when the destruction of the nose has taken place for a long time, when the history is imperfect, and no concomitant symptoms can be made out, or have been noticed by the patient. We have seen such difficulty occur, and have had frequent opportunities of seeing patients passing from one hospital to the other, the same case giving rise to somewhat different views.

It must be confessed, however, that when a case of this nature has assumed a very chronic character, the importance of an accurate diagnosis is partially weakened; for there is, under such circumstances, but little to be done but attend to general health, and remove such necrosed bones as would by their presence act as foreign bodies, and cause the ulceration to spread farther.

Mr. De Morgan's patient presented no very encour

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aging aspect, as will be seen by the sequel; but time, simple medicines, good diet, and attention to the partly detached and dead portions of bone, succeeded in arresting the progress of the disease, and bringing on cicatrization in a case where a very unfavourable prognosis might justly have been given.

The patient, Henry Y——, thirty-five years of age, of light complexion and lymphatic temperament, was admitted into the Middlesex Hospital in January 1851, under the care of Mr. De Morgan, with complete destruction of the nasal bones, cartilages, and soft parts; great eversion and thickening of the upper lip, as also of the lower lid of the right eye, from spread of ulceration and partial cicatrization. The ulcerating process was evidently still in full activity, the ascending processes of the superior maxillary bones were laid bare, and carious; the ethmoid bone, with a portion of its descending lamella, could be seen, and a low kind of inflammation was perceptible along the edges of the soft parts. The mischief seemed to have been confined to the nasal organ, the upper lip, cheeks, and forehead; as, when the mouth was opened, no striking solution of continuity was seen to exist in the hard palate.

On close examination, however, and with the patient's indications, a small aperture, in the mesial line and posteriorly, could be distinguished. This had formed in the usual way—namely, a tubercle had sprung up on the spot; after remaining for some time in an inflamed state, and discharging pus, pieces of necrosed bone had gradually come away, and a small aperture, establishing a communication between the mouth and the nasal fossæ, had been the consequence. The patient's voice was, of course, considerably altered; there was not much pain, but the discharge of purulent matter pretty abundant. By closely examining the sufferer, the following history was elicited.

It appears that the patient left the Royal Navy about twelve years since, in excellent health; one year afterwards he was very much troubled by ulcerations around the anus; these became very extensive, discharged profusely, and gave him great pain and uneasiness for six months. He was given a box of pills, which, as he says, completely cured him, without however making his mouth sore. It was of some importance to obtain clear data on the latter point, but the patient was very explicit on the subject. He joined the navy again about ten years since, in very good condition, and enjoyed very robust health, until he returned from New Zealand, two years afterwards. He was now employed on a railway, his duty being to watch at night; he had to sleep upon a cold brick floor, with coke fires around him; and it was at that time that he first was attacked with well-marked sore-throat.

It is necessary here to make a pause in the narration of facts, in order to state that the patient was very carefully questioned as to any primary symptoms he might have noticed, especially as the ulcerations around the anus might have been an extension of such primary disease along the cruro-scrotal cleft, towards the anal region; but the man, speaking in perfect good faith, and evidently anxious to give every information, clearly stated that he never had had any sore on the penis (though gonorrhœal discharges had now and then occurred) either before or after the ulcerations had appeared on the anus. Thus, in searching for a syphilitic origin, we find that the very first link in the chain of symptoms is, in some degree, wanting.

In proceeding with the history, we find that after several very severe attacks of sore-throat, (and *possibly* ulceration about the velum or tonsils,) a peculiarly fœtid discharge from the nose took place about three years ago. When that discharge had continued for some time, the septum nasi began to loosen, and in the space of six months the whole vomer had come away in separate portions of necrosed substance. The soft parts now fell in, and ulcerated from within outwards; the disease continued, and spread, without giving any pain, until the whole of the soft parts were destroyed, the ulceration creeping along the lower lid of both eyes, and on the forehead.

One year sufficed for all this havoc, and the destruction was the more complete, as the patient, instead of applying for medical aid, was content to use a few ineffectual homely remedies. When the disease had in some degree reached its height, he presented himself at the London Cutaneous Institution, where he was treated for some time, and the mischief probably arrested. We had afterwards an opportunity of seeing the patient in another hospital, where he stayed but a very short time, as it was considered that nothing could be done for him. It was here that we first became acquainted with the main facts of the history, and the man was soon afterwards admitted under the care of Mr. De Morgan, into the ward where cases of cancer are generally placed.

And here one can hardly help establishing a comparison between two diseases which so frequently produce the same ravages, and are yet so different in their essence. One, though sometimes fearful, yet amenable to cure by means of a specific; the other, slower in its progress, but beyond human art, and having once fastened on its victim, never letting go its hold, in spite of the best efforts of man, aided by fire or cutting instrument. One producing manifestations more or less severe according to the subject attacked; the other, ever surely and certainly developing in various parts of the body, with any kind of temperament, though pursued, tracked, and extirpated by the relentless hand of the surgeon. One, in fine, transmissible only under certain circumstances, and, happily, not necessarily propagated from parent to progeny; the other, infiltrating itself with a melancholy certainty through a chain of unfortunate victims.

Plenty of scope for reflection is offered to the intelligent student in the cancer wards of the Middlesex Hospital—a place where the disease may be seen and studied in its varied and distressing phases, where pathological information cannot be gained without the soul being moved to pity, and where the surgeon, though unable to cure, may do much to palliate, and prepare the "Εὐθανασία." We hope soon to be able to bring forward some of these cases, which will offer instruction both in an ætiological and therapeutical point of view.

Mr. De Morgan's patient was first treated with soothing applications, as the ulcerations were in a foul irritated state; and after a few doses of depurating medicine, iodide of potassium was prescribed, and the use of this salt was continued in small doses for upwards of six months. In the meanwhile, a good and nutritious diet was allowed, with a sufficiency of malt liquor to promote healthy nutrition where little exercise is taken. The caries continued its progress for some time; portions of the turbinated bones and the ascending plate of the superior maxillary bone, were gradually detached, and these were carefully removed whenever they were felt loose. The ulcerations under the eyes and on the forehead gradually cicatrized, the margins of the oval aperture left by the destruction of the nose became firmer, and the everted upper lip and lower lid lost their tension, though they did not regain their former shape; the discharge diminished, soon ceased entirely, and at

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last the patient was in a fit state to be discharged, the disease being arrested, and cicatrization complete wherever ulceration had existed. It remains for the prothetic art, should the patient think it worth his while, to remedy the disfigurement which the entire loss of the nose necessarily produces.

Now, it might well be asked, Was this a syphilitic or a simply lupoid affection? In favour of the syphilitic hypothesis, we have—1, the suspicious sores on the anal region, the explanation of which might be given in various ways; 2, the possibility of the patient having had a chancre in the urethra at the time of the repeated discharges, or in any other part of the body where it might remain unnoticed; 3, the successive attacks of sore-throat which preceded the necrosis of the vomer; 4, the discharge from the nose and the loss of the septum having *preceded* the ulceration of the soft parts.

In favor of the supposition that the patient had all this time suffered from lupus, the following facts might be adduced:—1, there never had been any *bona fide* and evident primary sore; 2, the ulcerations in the anal region having disappeared without a regular course of mercury; 3, no eruption of any kind having ever occurred; 4, no loss of hair or pain in the bones; 5, no iritis, and no *certain* ulceration of the velum or tonsils; and 6, the length of time (five years) which elapsed between the only supposed syphilitic symptom (the anal sores) and the first appearance of sore throat.

Such, we conceive, is the balance of evidence on both sides, and we have dwelt upon it, not so much (as stated above) because the matter required to be fully elucidated in view of the treatment, but mainly as a purely pathological inquiry. We have followed with great attention another case of this kind, where the patient was first under the care of Mr. De Morgan at the Middlesex Hospital, and then under Mr. Curling at the London Hospital; here the syphilitic principle seemed to predominate, though the question might still be looked upon as open to discussion. We shall have much pleasure in drawing attention to this case on another occasion, and shall then, if possible, combine it with a third case of destruction of the nose, plainly and incontestably syphilitic.

ST. GEORGE'S HOSPITAL.

Wound of the Abdomen; Extravasation; Death.

[Under the care of Mr. Cutler.]

The powers of repair displayed by nature, after many of the injuries which come under the surgeon's notice, are well calculated to excite our admiration; the formation of new bone, the filling up of deep ulcers, the consolidation of fractures, &c., are phenomena of an admirable character, and which we perhaps do not appreciate sufficiently because they so frequently are presented to our eyes. Nor is the rapid manner with which adhesions are formed, in wounds both of the chest and abdomen, less wonderful; and by such adhesions, as beautifully shown by Mr. Travers, extravasation is prevented and life preserved. And even when extravasation *does* take place, the pressure of the elastic bowels, and of the diaphragm and abdominal muscles, not only frequently presents an obstacle to the wide diffusion of extravasated matter, but often propels it towards the external wound (Petit.)

But it is plain, from the fatal cases which now and then occur, that the form of the abdominal wound or of the instrument inflicting it, the state of distention of the intestines, or the peculiar manner in which the mesentery or the omentum is injured, may put an obstacle to the beneficent laws of repair, and cause the case to assume an unfavourable aspect.

Mr. Travers states that the following are the only circumstances in which an effusion of the intestinal contents may occur:—"If the gut be full and the wound extensive, the surrounding pressure is overcome by the natural action of the bowel tending to the expulsion of its contents. But, in defect of either of these states, effusion cannot follow. When, however, air escapes from the bowel, or blood has been extravasated in great quantity within the abdomen, at the time of the injury, the resistance made to effusion will be less effectual, although the pressure of the sides of the abdomen is the same, as such fluids will yield more readily than the solids naturally in contact with each other. Effusions more generally follow ruptures of the bowels by blows or falls upon the abdomen, than ordinary penetrating wounds."

We were very forcibly reminded of the exceptions which Mr. Travers here points out, by a case lately under the care of Mr. Cutler; the wound, however, was far from extensive, but the intestine was probably full; or else, as Mr. Travers says, air or blood was suddenly extravasated, and offered *less* resistance to the escape of fæcal matter than either the contiguous intestines or the abdominal walls would have done.—The case, of which we are going to give a few particulars, will be found of value, as a careful inspection has revealed the exact nature of the injury which brought on the fatal issue.

Thomas V——, aged fifty-eight years, was admitted Aug. 2, 1851, under the care of Mr. Cutler. The patient, a butcher by trade, was, on the evening of his admission, playfully wrestling with one of his companions, who had a knife in his hand, when the former accidentally ran against the knife, and received a stab into the abdomen. On his admission at ten o'clock in the evening, a wound was discovered just above the umbilicus, the probe passing about two and a half inches down this solution of continuity. There was no bleeding of importance, nor any escape of fæcal matter, but the patient was in a collapsed state, and the pulse imperceptible. He was made to take twenty drops of laudanum.

The next day the bowels did not act; the abdomen being much swollen and tympanitic, and this distention causing the patient great uneasiness, he was ordered an enema of rue; and as this produced no effect, a rhubarb draught was prescribed.

Later in the day, at two P.M., as the patient was getting weaker, four ounces of brandy were ordered for him. On the third day, the bowels had not been moved; the skin and extremities were very cold, the pulse imperceptible, &c. An enema of senna with castor-oil was given, which brought away a small quantity of fæces. Later in the day he rallied a little, felt more cheerful, and his voice was much stronger; the pulse was 88, and the breathing 50.—He soon, however, relapsed, and died on the third day after admission.

On a post-mortem examination, the body was found well-formed, and very obese, with great distention of the abdomen; the wound was three-quarters of an inch long, and situated on the right side of the umbilicus; a dark-red, turbid fluid flowed through it on pressure. On opening the abdomen the same kind of fluid escaped. The opening, which must have been made by the wounding instrument, was not then visible; the omentum, in certain portions, was of a dark tinge, and the parietal layer of the peritoneum thickened, especially in the neighbourhood of the wound.

The upper surfaces of the small intestines were in most parts of a dark-red colour, and coated by a thick-

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sh layer of lymph of soft consistence; this also was he medium of slight adhesion between the various onvolutions of intestines. Among the latter and under he great omentum, somewhat to the left of the mesial ine, where the omentum was found partly adherent o the abdominal parieties, was a quantity of fluid *eal matter* which had escaped from a wound in the nterior surface of the small intestine, situated under he omentum, and immediately behind the external round. This opening was about fourteen or sixteen nches from the iliocæcal valve. The whole of the nucous lining of the intestinal tract was healthy, as ell as the rest of the body.

The dark-red turbid fluid was very probably blood, hich had been extravasated at the moment of the njury, or soon afterwards, and whether this blood had ny influence on the fæcal extravasation must remain question; but it would seem that the fact of the ounded small intestine being situated *under* the mentum, may have been in the way of that effectual ressure which, as stated above, so often prevents extravasation.

It will likewise be remarked that this case verifies he opinion that "wounds of the small intestines are nore dangerous than those of the large."—(Cooper.) ut it would appear from a case which we lately saw t University College Hospital, that protrusion of owels after a stab of the abdomen, with wound of the ntestine, though of so distressing an aspect, is not so angerous as when the bowel is wounded within the avity. The patient, who was admitted under the are of Mr. Erichsen, received from her husband a vere stab into the lower part of the abdomen, with kind of dagger. The protrusion of intestines and he hæmorrhage were considerable, and it was some me before the patient was brought to the hospital.

When Mr. Erichsen saw her, he found that the mall intestine had been perforated by the wounding strument in two places. He applied fine sutures to ese solutions of continuity in the intestines, returned the mass of bowels into the abdomen, and lightly osed the wound. Active antiphlogistic means were sorted to, and the case was eventually brought to a vourable issue. We saw the patient a few days go; she is now in good health, and the digestive nctions are performed in a very satisfactory manner.

All surgeons, however, are not in favour of the actice here followed by Mr. Erichsen with such appy results. Scarpa, for instance, condemned the tures with much warmth, and Samuel Cooper sides ith him in the following terms:—"The very nature the process by which the reparation of wounds of e bowels is effected, is a weighty argument ainst the employment of a suture. In their cicatrition they follow quite a different course from that simple wounds of the skin, muscles, or any other rt of the body; their edges never become immedisly applied to each other, and therefore strictly eaking they do not re-unite. Their cure is altother completed through the medium of the surnding parts; that is to say, by the adhesions which e intestines contract with the great sac of the perinæum lining the cavity of the abdomen, or with e productions of this membrane, which compose e external covering of the greater part of the viscera."

And further—"Unless, therefore, it be allowable to ppose, not only that the divided portions of bowel e be sewed together so closely and accurately at ery point as to remove all possibility of effusion of contents, but that this can also be done without k of exciting inflammation of the bowel, thus handed, dragged, and stitched, I must agree with Scarpa, respecting the impropriety of thus boldly sewing up wounds of the bowels, with as little scruple as a hole in a glove." And lastly,—"We may therefore infer, with Mr. John Bell, 'that if there be a work of supererogation in surgery, as I believe there are but too many, surely this of sewing an intestine is one.'" And yet this very practice, so vehemently condemned, has certainly saved life in many instances, and very probably in the case which we have just mentioned.

KING'S COLLEGE HOSPITAL.

Internal Abscess of Bone.

[Under the care of Mr. HENRY LEE.]

THE subject which is this day fixing our attention is intimately connected with a fact very flattering to British surgeons—viz., the signal service rendered by Sir Benjamin Brodie to surgical science by the originality of his researches and valuable therapeutical inferences regarding abscess of bone. Indeed, when we consider that Sir Benjamin's elucidations touching this very painful affection form but a small portion of the valuable labours which have shed so much light on modern surgery, we feel inclined to think that the names which will hereafter be chronologically attached to those of Wiseman, Pott, Hunter, Abernethy, Astley Cooper, Liston, &c. &c., will be full worthy of such association.

That the surgeons of Great Britain have contributed a large share in the advancement of their profession cannot be for a moment doubted; a sketch of the services they have rendered would form a very interesting historical retrospect, and we would recommend this subject to some of the talented gentlemen who have this year been entrusted with the introductory lectures at our medical schools. Such a picture would certainly act as a powerful incentive to young men, and that it could be brought down to a very recent period is proved by a discussion which lately took place at the Academy of Medicine of Paris. The debate arose out of a paper of M. Malgaigne on a new (!) treatment of fistulous tubercular testicle, and the names of Sir A. Cooper, Mr. Syme, and Mr. Curling, were constantly brought forward.

In returning to abscess of bone, we find that Sir B. Brodie was first led to recognise the disease in question by a case referring to a young man, twenty-four years of age, where all the now well-known symptoms of abscess of bone were manifested; the limb was amputated, and a cavity as large as a small chestnut found in the lower portion of the tibia. Sir Benjamin says, in his lecture on the subject, "On observing these appearances, I could not help saying, that if we had known the real nature of the disease, the limb might have been saved."

The author mentions nine cases which since that time have been treated by himself; in the first five the abscess was situated in the lower end of the tibia, the patients being all young. In each of them the trephine was used with the best results. Sir Benjamin justly says, in his remarks upon these cases, "It is satisfactory to know that this simple method of treatment has already preserved many limbs which must otherwise have been sacrificed, and it cannot be doubted that it will be the means of preserving many more. (this prediction has been fully accomplished.) when it is more generally adopted by those engaged in operative surgery." We now beg to call the attention of our readers to the case lately under the care of Mr. Lee.

The patient, James S——, aged twenty-six, of a dark complexion and spare make, was admitted August 12, 1851, under the care of Mr. Lee. He stated that, seven years and a half ago, he begun to ex-

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perience great pain in the tibia about midway between the knee and ankle, the paroxysms occurring principally at night, and leaving him at about five in the morning. There was at that period no tenderness upon pressure, and the pain continued for nine weeks. A recurrence of these attacks has occurred occasionally down to the present time. About three months ago the patient struck his shin against a chair; on the same day he experienced severe pain, which soon became so intense that he could not sleep at all at night for so much as four weeks. A blister was applied at this time, the effect of which gave him ease for about five or six days, but the patient having indulged rather freely in ardent liquors, the pain recurred as severely as before.

Mr. Lee advised the application of another blister; the denuded surface was kept open for three or four days, and this counter-irritation gave relief again for about seven days, but without any apparent cause the pain returned. Mr. Lee considered that this state of things was in all probability connected with a limited abscess within the bone, as on the spot to which the pain was referred there was neither swelling, redness, nor tenderness; he therefore determined to penetrate the shaft of the tibia with the trephining instrument, and evacuate the supposed purulent collection.

The patient was carried into the operating-theatre, and chloroform having been administered, Mr. Lee made an H-shaped incision over the tibia, about midway between the knee and ankle, on the spot where the pain was complained of. A small trephine was applied to the bone, when the integuments were reflected, and a circular portion of osseous substance, about two inches thick, was removed. As the trephine was perforating the lowermost portions of the bone, a small quantity of glairy-looking fluid oozed out, and on entirely moving the detached bone, about two drachms of a white pultaceous sort of pus escaped.—Very little blood was lost during the operation; the edges of the wound were lightly brought together, and the patient stated, when he had recovered from the effects of chloroform, that the pain had quite disappeared. No constitutional disturbance occurred; the wound progressed favourably, and about a month after the operation it was almost cicatrized. The distressing pain which had for so long a time embittered the patient's life, has not recurred, and it may fairly be now supposed that a permanent cure has been established.

We have somewhere read that this affection attacks principally people of middle or old age, but the preceding case, as well as those treated by Sir B. Brodie, will tend to invalidate this opinion, as the patient here was only twenty-six. Mr. Liston operated upon a policeman, twenty-two years of age, affected exactly like Mr. Lee's patient, and the same means brought about the same results; it should likewise be noticed that in both cases the abscess was situated in precisely the same locality; and it would form a nice subject of inquiry why the shaft of the tibia is so obnoxious to this affection.

It should not be overlooked that abscess of bone, when left to itself, may eventually cause the complete disorganization of the tibia, or materially interfere with the knee or ankle joint, or, at best, when the matter finds an issue outwardly, leave an intractable fistula, with thickening of bone.

As to the symptoms, Sir Benjamin Brodie expresses himself as follows:—"When the tibia is enlarged from a deposit of bone externally, when there is excessive pain, such as may be supposed to depend on extreme tension, the pain being aggravated at intervals, and these symptoms continue, and become still further aggravated, not yielding to medicine or other treatment that may be had recourse to, then you may reasonably suspect the existence of abscess in the centre of the bone."

Mr. Partridge, of King's College Hospital, had, some years ago, a patient thus affected, under his care; the man died of an internal affection—but we fully remember the post-mortem examination, which, on a longitudinal section of the tibia, brought to view, close to the malleolus, a small cavity in the interior of the bone, which communicated with the external surface by a narrow but very distinct canal. A somewhat similar case is mentioned in Sir Benjamin Brodie's lecture. It has been noticed that such abscesses may, on becoming chronic, gradually enlarge by the absorption of the cancellous substance, and expansion and thickening of the laminated surface. The matter pent up is generally mixed with debris of osseous structure, and very offensive; we recollect a case of this nature under the care of Mr. Hilton at Guy's Hospital. The tumour, situated on the lower part of the femur, was at first looked upon as exostosis, but the steps of the operation proved it to be of a pyogenic nature. We shall take an early opportunity of bringing this case before our readers; it will form a very appropriate sequel to the one which we have just detailed.

The museums of our hospitals possess pathological preparations illustrating this disease. At the Middlesex Hospital, No. iv., 6, is a good specimen of abscess in the lower end of the tibia, close to the ankle-joint; and No. iv., 31, in the head of the femur.

ROYAL FREE HOSPITAL.

Amputation at the Ankle-joint.

(Under the care of Mr. Thomas Wakley.)

James C——, aged nine years, of delicate appearance, much emaciated and pallid, was admited, under the care of Mr. Thomas Wakley, April 28, 1851, with extensive disease of the left foot. He stated that nine weeks before admission the dorsum of his foot began to swell, without having experienced any injury. An abscess formed, burst spontaneously, and for a short time the foot seemed to be getting better; but suppuration and fistulous tracts became established; the foot could no longer be used, and the patient was brought to the hospital in a very weak state.

He was given the benefit of a well-directed treatment for several months; but the bones both of the tarsus and metatarsus were so extensively carious, that no beneficial result ensued. On July 23, 1851, Mr. Wakley proceeded to the removal of the foot according to Mr. Syme's method, the patient being under the influence of chloroform.

Twenty-four hours after the operation, the anterior edge of the flap was cold and discoloured, but by means of yeast poultice and cotton wool, the gangrenous process did not extend far into the flap; and on the next day the condition of the latter was much improved, and it began to discharge purulent matter of very light colour. The pulse was, however, 136, small, and the tongue abnormally red and moist.

On the fourth day the discharge was more healthy, and it was noticed that the portion of flap which had perished was not extensive, a very large and effective share of the flap being left. But the little patient was so sensitive of pain that it was a difficult matter to apply the proper dressings to the stump.

On the sixth day the small amount of slough began to separate; there were convulsive motions in the leg, and the pain was very severe. When the sloughs were thoroughly cast off, in another couple of days, a

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piece of bone was left bare; the granulations were very vascular, and there was a general oozing of blood when the stump was moved for the purpose of dressing it. The patient now progressed very favourably, and eleven days after the operation, Mr. Wakley allowed him a bottle of stout. The small portion of bone now exfoliated, and in its site a flat piece of cartilage was noticed. The flap was still movable on its upper and anterior portion, and lay in contact with bright-red granulations which had sprung up in the vicinity.

The patient's health was in the meanwhile satisfactory; his diet of a very nutritious character, and his strength kept up by stout, &c.

On the fifteenth day, a small piece of the lower end of the tibia which had separated at the epiphysis, was taken from its attachment to the flap, when the very vascular granulations bled freely.

About one month after the removed of the foot, the patient was in all respects doing well; he could bear firm pressure on the stump, and cicatrization in front of the leg was almost complete. The stump was turning out an excellent one, as but a very small portion of the flap had sloughed away after the operation.

The boy, though much worn and emaciated by the chronic disease which had attacked the foot, gradually recovered his strength after the cause of irritation had been removed, especially as the diet was so regulated as to minister abundantly to nutrition when the danger of inflammation was past. The patient presents now one of the best stumps after Syme's operation which have ever come under our notice; and from his case it may with some justice be inferred that youth is a very favourable element in operations of his kind. It would also appear that the best efforts of the surgeon should be directed towards the prevention of sloughing in the flap; for it is evident that the destructive process, carried to a certain extent, will altogether remove any hope of giving the patient a serviceable stump.

WESTMINSTER HOSPITAL.

Enormous Pendulous and Fatty Tumour in the Clavicular Region; Removal; Recovery.

(Under the care of Mr. CHARLES G. GUTHRIE.)

Of all the tumours which are generally brought before the surgeon, the adipose or common lipoma is certainly the most frequently met with, and this circumstance is doubtless a matter of congratulation, since this peculiar form is of a very benign kind, and is so seldom accompanied by unpleasant complications. It is, however, somewhat difficult to ascertain, in certain cases, the actual nature of a given tumour, and the fatty kind will sometimes yield to the touch a sensation of elasticity, which may easily be mistaken for fluctuation; so that, in certain cases, a cystic origin may be supposed to exist, when we have to deal with mere fat. The adipose tumour has likewise been mistaken for a fibrous growth, owing to peculiarities of which Mr. Paget speaks in his excellent Lectures on Tumours:—"The capsules of these fatty tumours may vary somewhat in thickness and toughness, and so may the partitions that proceed from them into the mass. They are usually very delicate, but sometimes thick and strong, and give a density and a roughness, which approaches to the character of a fibrous tumour."—*Medical Gazette*, July 4, 1851, p. 2.

It is very unfortunate when patients, either from fear or neglect, allow adipose tumours to reach an inordinate size, for extirpation becomes more hazardous as the size of the tumour is increasing; and some authors even think that such a tumour, originally simple, may with time degenerate into a malignant growth. Mr. Paget mentions (*loc. cit.*) that the largest tumour of this kind in London is that in the museum of St. Thomas's Hospital, which was removed from a man's abdomen by Sir Astley Cooper, and weighed 37 lbs. 10 oz. It will be found under No. 1956, in front of a drawing representing the patient before the operation. One of the most formidable is that in the College Museum, removed from a man's neck by Mr. Liston, (No. 190,) where it had been growing for twenty-two years. It will be seen by the few details which we are subjoining, that in Mr. Guthrie's patient the tumour had been growing seventeen years.

Nathaniel W——, forty-six years of age, a tailor, who has always inhabited the country, was admitted, July 22, 1851, under the care of Mr. Charles Guthrie, with an enormous pendulous tumour, attached along the left clavicle, from the acromion to the upper piece of the sternum, hanging downwards on the chest, reaching as low as the ensiform cartilage, and presenting about the size of two full-grown heads.

The patient is of dark complexion, thin, sallow-looking, very nervous, and gives the following history:—When twenty-two years of age—namely, twenty-four years since—he received a kick from a horse just behind the left ear. He was much stunned by the blow, and was taken up for dead. He, however, recovered from this injury, and felt no ill consequences from it until seven or eight years afterwards, when the present tumour began to make its appearance, just in the centre of the clavicle. It was, when first noticed, about the size of a walnut, and rather painful, the sensation being somewhat of a rheumatic character. This tumour increased slowly for several years, without any interference, when the patient came to town, and showed himself to Mr. Wardrop, who punctured it; the discharge was very scanty, and of a sanguineous character. From this time the tumour began to grow more rapidly, taking its direction downwards towards the chest. When it had attained the size of a child's head, it became painful, especially when not well supported, or exposed to the air; it felt hard and nodulous in some parts, and softer in others. Mr. Callaway, who was now consulted, proposed the removal of the mass, but the patient, who is a very nervous man, could not make up his mind to have the operation performed.

Mr. Guthrie, senior, was at that time also of opinion that removal was the safest course which could be adopted; the patient, however, returned with the pendulous mass into the country. In 1841, the man presented himself to Sir Astley Cooper, when it was found that the tumour had reached the weight of ten pounds, was hanging down upon the chest, and becoming extremely troublesome, though the patient, being a tailor, was able to carry on his trade with the precaution of giving due support to the tumour. He refused Sir A. Cooper's offer of removing the tumour, and on returning home, by applying caustic to it himself, on a circumscribed spot, he made an opening, and gave exit to a thickish fluid, sometimes white and at other times sanguineous.

The drain thus kept up moderated the growth of the tumour, and it remained for a long time of the size and shape which it presented on admission, when it weighed almost eleven pounds. On the 22nd of July, as stated above, the patient was admitted under the care of Mr. Charles Guthrie, and consented at last to an operation, which had of course become now more hazardous than if it had been performed ten years previously.

On the 26th of July the patient was brought into the theatre, and having been narcotized by chloroform, Mr. Guthrie made an elliptical incision in a slanting direction from above downwards, and reflect-

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ed a large flap of skin towards the shoulder. After a little dissection, the tumour was found to be of a fatty nature, though the opinion generally held before the operation, was that the tumour was formed of one or more cysts. When it had been thoroughly ascertained that the mass was wholly composed of adipose matter, Mr. Guthrie proceeded to enucleate it, and after a few efforts the fatty tumour was completely removed.

The hæmorrhage was not considerable, and no vessel of importance had to be tied; the lips of the wound were brought together, and though the tumour had been very large, there was not a superabundance of skin. The chloroform had a very irritating influence upon the patient: he was some time before he recovered from its effects, and much of the subsequent discomfort which he experienced was attributed to its use. The progress was pretty favourable for a little time, but the fever ran somewhat high, and a certain amount of skin sloughed away. By means of a nutritious diet and stimulants, the patient's strength was kept up: the wound began to cicatrize, and about five weeks after the operation, the part was almost healed up, and the patient in very good condition. In Mr. Miller's "Principles of Surgery," second edition, a wood-cut engraving will be found, p. 309, which represents a tumour bearing much analogy, as to shape and size, with the one removed by Mr. Guthrie.

ST. BARTHOLOMEW'S HOSPITAL.

Phagedænic Bubo in the Female.

(Under the care of Mr. LLOYD.)

AMONG the various complications which may occur in simple ulceration, phagedæna is certainly the circumstance which justly causes alarm both to the patient and the surgeon. Those who have often witnessed the distressing ravages which phagedænic ulceration sometimes makes in the parts attacked, and the sad mutilations which it brings on when seated in the parts of generation, will certainly agree with us when we say that this dreadful tendency is a subject worthy of the surgeon's close attention, and for the treatment of which his best energies will not be superfluous. We lately witnessed a case of this kind in Mr. Lloyd's wards, and the success which attended the means adopted was so complete and (as far as we are concerned) so unexpected, that we hasten to give our readers a rapid sketch of the same.

Before entering into details, however, it would be useful to consider whether we know the primary cause of phagedæna. Is it connected with certain kinds of ulceration? or shall we seek it mostly in the patient's constitution? Systematic writers generally incline to the second opinion; nor will the present case militate with this view. It must nevertheless be confessed that very destructive phagedænic ulceration will sometimes set in with patients, who, *à priori*, would have been looked upon as least likely to be thus affected.

Confining our views to inguinal ulcerations, as resulting from bubo, we might naturally be inclined to inquire, whether, of the various sorts of bubo, any particular kind is most prone to run into phagedæna. Observation has not, as far as we know, determined anything certain on the subject—though, setting aside for a moment acute phagedæna, with which we are now more directly concerned, it might be said that *chronic* phagedæna is mostly connected with syphilitic bubo, the distressing horse-shoe form sufficiently testifying to this.

But if we admit Ricord's distinction between buboes resulting from mere irritation, (both gonorrhœal and syphilitic,) and chancrous buboes, depending on the actual transmission of the virus, we might, *primâ facie*, be inclined to suppose that where the virus is actually at work, ulceration is likely to be the most destructive, while the contrary appears to hold good: for Ricord states that such buboes ordinarily attack one gland only, and are much less prone to suppurate than buboes resulting from mere irritation. It is extremely probable that the complication which is now occurring us has its mainspring in the patient himself: excesses, debility brought on by previous disease, either syphilitic or not, the scrofulous taint, &c., are very probably the peculiarities most likely to change the character of any given ulceration. We would finally remark, that the case about to be detailed has this unusual feature, that the destructive ulceration in the groin occurred in a female. It is well known that the weaker sex are less obnoxious to buboes than men. Ricord says, on this head, "Women seem, at first sight, to be more likely to suffer from adenitis (Ἀδήν, a gland) than men, from the greater delicacy of their lymphatic system; but not being exposed to the same fatigues and vicissitudes of temperature as men are, nor indulging in the same excesses which the latter sometimes commit, we find them very rarely troubled with buboes." (M. Ricord's Lectures in THE LANCET.)

The following details were furnished by Mr. Francis Hall, one of Mr. Lloyd's dressers:—

Margaret B——, nineteen years of age, a fair, unhealthy, and lymphatic-looking girl, was admitted into Magdalen ward, under the care of Mr. Lloyd, March 23, 1851, with slight gonorrhœa of three weeks standing, excoriations about the labia, and a small, indolent bubo in the right groin. The patient has led a very irregular life for the last two years, and she had been in the hospital, about four months since, under the care of Mr. Stanley, with ulcerated condylomata, which yielded to astringent lotions. She first discovered a discharge about three weeks ago, and the bubo one week afterwards; the latter had been very small at first, had gradually increased in size, and opened spontaneously three days before admission.

On examination the discharge was found pretty abundant; excoriations were scattered on the labia, and the bubo was small, of a dusky-brown colour, and about the size of a nutmeg. In the centre of the swelling a small opening is noticed; the rest of the tumour yields a doughy sensation to the finger, and an erysipelatous redness surrounds it for about three inches. No pain in the part is complained of. The patient was ordered milk diet, antimonial saline draughts three times a day, and poppy fomentations to the groin, to be followed by a linseed poultice.

On the second day it was found that the bubo was increasing in size, the edges of the opening were becoming irregular, and discharging dark unhealthy-looking matter. Mr. Lloyd now directed that the bubo should be further opened by means of potassa fusa. The pain in the part became, however, extremely severe, so much so that for several nights the patient could not obtain any sleep; the tumour in the groin was, meanwhile, increasing in size, burrowing in various directions beneath the integuments, and discharging thick, dark, and unhealthy pus. Balsam of Peru was now applied to the wound beneath a bread poultice.

The sore nevertheless began to spread rapidly, and took on a sloughing character, discharging very offensive matter; the pulse rose to 102, very sharp and tenderness of the abdomen was complained of. The saline draughts were continued, and one grain of opium taken every night.

A week after admission the patient was very low and in great pain; the sore was extending rapidly.

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especially towards the right labium, and had reached the size of a duck's egg. The opium was now given every sixth hour; beef-tea was allowed, and a draught of nitro-muriatic and hydrochloric acids administered every sixth hour. The pain in the abdomen increased notwithstanding, and this cavity became distended and tympanitic; frequent fits of vomiting came on, and the nights were almost sleepless. The inguinal ulceration was in the meanwhile continuing its phagedænic progress; several enlarged glands were now entirely denuded, and rose in the centre of the sore, there being a great tendency to bleed. Balsam of Peru was now again applied, the opium continued, and hydrocyanic acid given in effervescing draughts to allay the vomiting. Brandy was allowed, and the sore frequently washed in opium lotion.

The symptoms in the abdomen were, in the meanwhile, becoming more and more severe; the tympanitis increased, and vomiting continued. A blister was applied to the epigastrium. The phagedænic ulceration proceeded unabated, and on the tenth day after admission it extended from the anterior superior spinous process of the ilium to the symphisis pubis, and it was about destroying the right labium. The ulcer measured three inches and a half from above downwards, laying bare the femoral vessels for some distance above Poupart's ligament.

Mr. Lloyd now resorted to energetic measures; the nitrate of silver in substance was freely applied to the whole extent of the sore; it was thrust underneath the undermined and loose edges, and carried over the whole of the exposed surface. The patient took after this a dose of opium; it was, however, instantly rejected, as well as several subsequent doses which were administered; but the pain abated towards the evening, and the medicine was retained. The sloughing process seemed to have been effectually controlled by the application of nitrate of silver. (Mr. Lloyd refrained from using the strong nitric acid, on account of the close vicinity of the femoral vessels;) the phagedænic extension now only took place in a very few spots, which were immediately freely touched by the nitrate of silver. The countenance became somewhat more cheerful, but the patient was still very low, and the sickness, though not so violent as before, continued. Mr. Lloyd ordered dilute nitric acid to be taken in water every third hour, brandy, arrow-root, &c. &c., and the ulcer to be frequently washed with a solution of nitrate of silver, half a drachm to the ounce.

On the second day after the free application of the solid nitrate of silver, the phagedæna was arrested, the pain in the abdomen had diminished, and the draughts of tincture of opium were retained. On the fourth day the favourable aspect was maintained. The diet was improved and the brandy continued. The sloughing having now completely stopped, and the parts being clearing very satisfactorily, Mr. Lloyd ordered a lotion of sulphate of copper, five grains to the ounce.

On the eighth day after the complete cauterization, the sore was greatly improved; it looked healthier, and was gradually putting on a better aspect. The patient now took iodide of potassium thrice a day, and continued the opium at night. The diet was very nutritious, the cicatrization went on steadily, and on May the 18th, about two months after admission, and six weeks after the free application of the solid nitrate of silver, a firm and linear cicatrix had formed, measuring about an inch and a half in width and three in length.

We saw this dreadful ulceration just as the phagedænic tendency was at its height, and when the sore had reached its greatest dimensions, and we do not recollect ever having seen such a distressing, extensive, foul, and ulcerating solution of continuity in the living frame. The whole of the inguinal region, as high up as the anterior superior spinous process of the ilium down to almost the saphenic opening of the thigh, was one large, gaping, dark, irregular, and bleeding sore, and the patient looked so ill and so weak, that a very unfavourable prognosis was immediately and involuntarily formed in the mind of the beholder. And yet there was sufficient strength left in that debilitated frame, assisted by generous diet and stimulants, to effect, in a comparatively short time, a hardly hoped-for and complete cicatrization.

There is really something very cheering in the beneficial effects of energetic measures; nothin seems, in fact, to be of any avail but a complete chang of action; the part must be profoundly modified, a entirely new stratum must be brought to light, the old one annihilated, and detersive means be pushed with activity. Nothing can supersede the free application of the strong nitric acid in phagedæna, and if that acid be counter-indicated by the too great vicinity of important vessels, it will be seen by the foregoing case that the lunar caustic, unsparingly used, in substance, will have almost the same beneficial effect.

CHARING-CROSS HOSPITAL.

Congenital Malformation of the Chest.

Dr. Chowne presented to the clinical class of the hospital a case of congenital malformation of the anterior part of the thorax, in which the sternum was, if not wholly, almost wholly absent. The patient, Eugene G——, a German youth, had, in consequence of an attack of illness, been in the German Hospital, under the care of Dr. Swaine, and had been restored to health. Dr. Chowne stated that he was indebted to Dr. Swaine for the opportunity of bringing him under the notice of the students.

The youth was about seventeen years of age, but had the appearance of being three or four years younger; he is rather short, of light complexion, and slight form. He had been very unhealthy as a child, subject to glandular swellings in the neck, inflamed eyes, and pains in the head, with great delicacy of constitution. When he was about six years old, there was some apprehension that his right shoulder would be higher than his left; and from that time until he was about eight years of age, he was in the habit of suspending himself, with his feet *from* the ground, by the left hand, at the desire of his medical adviser in Germany. He is now, however, (with the exception of his thorax,) well grown. About two years since, he had intermittent fever. He has been in England about a year.

At the first view of the thorax, the sternum appears to be wholly absent, leaving a depression in the soft parts, within which very evident pulsation is visible and perceptible to the touch, in the situation of the pulmonary artery. When he is sitting at his ease, with his hands resting on his knees, the depression is about three inches in perpendicular length, from the ends of the clavicles to its lowest part, and the lateral boundaries are about an inch apart, and nearly parallel to each other. When he extends his arms backwards, keeping his hands about the level of his shoulders, so as to expand the chest, the depression widens, acquires a conical shape, and becomes at the upper part, between the ends of the clavicles, or base, about two inches wide. When he brings the arms forward, and the elbows together before him, the depression becomes narrowed throughout its whole extent, and the sternal ends of the clavicles come within half an inch of each other. At the lowest part of the depression, or apex, a substance forming a firm junction between

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the ribs of the opposite sides is perceptible. It feels to the touch more firm than ligament; and from the movement which takes place in the different movements of his arm, it would seem to be less solid than bone. This substance, however, whatever may be its actual structure, supplies in a very great degree the place of the sternum, and forms a firm and substantial union between the ribs of the two sides of that part. Springing from this substance, and clearly perceptible to the touch, is the ensiform cartilage in its natural situation.

The general movements of the ribs in respiration are essentially natural, and except in somewhat minute points, not different from those of the normal thorax, except in regard to the advancing and retiring of the sternal extremities of the ribs of the opposite sides towards and from each other in the respiratory movements. Under ordinary and quiet respiration, however, the movements were slight, and comparatively little change took place in the depression.

The sternal ends of the ribs of the same side are connected together by bony union, probably by portions of bone which should have constituted the sternum; as if the sternum, instead of forming a continuous bony union in the median line, from the ensiform cartilage upwards, had separated at that point, and a portion had gone to either side. With regard to the firmness and fixed position of the thoracic parietes, notwithstanding the absence of bony union between the two sides, from about half an inch above the ensiform cartilage to the sternal extremities of the clavicles, it was shown, that when the sterno-cleido mastoideus muscle of either side (along with other muscles of the same side) were brought into strong action by the youth's forcing his head strongly against the resistance of a firmly held hand, no unusual change of position in the clavicles took place; neither did any unusual change take place when the muscles of the two sides were brought into action in the same way. Thus the bony union between the ends of the ribs on the same side, continuing down to the solid union at the lowest part, in connecting the ribs of the opposite sides, contributed to the preservation of that solid and firm condition of the thoracic fabric, which is so necessary to a normal performance of the functions upon which life depends. The sounds of the respiratory movements and of the heart's action were normal at all parts where the stethoscope was applied over the ribs; when applied over the part deficient of bone, the sounds of the heart were peculiarly distinct and interesting. Dr. Chowne did not enlarge further on these peculiarities, as he had reason to believe that Dr. Swaine, whose patient the youth was, had given his accurate attention to those points, and had preserved notes of them. Dr. Chowne added, that with Dr. Swaine's assent, he should request the youth hereafter to be present at a meeting of the Medical Society of London.

GUY'S HOSPITAL.

Cæsarian Section; Mother and Child Saved.

(Under the care of Dr. Oldham and Mr. Poland.)

It is now some time since the annals of the hospitals of London have offered a case of Cæsarian section, in which both mother and child have survived this very dangerous operation;* nor is the cause for which it was performed in Dr. Oldham's patient of very frequent occurrence. Such causes are generally connected with coarctation of the pelvis, as is shown by the various statistical tables which have been published; whilst malignant disease with occlusion of the womb has so seldom necessitated the Cæsarian section, that we could not find an example of it in the works within our reach. Indeed, Dr. Churchill, in his excellent essay on the operation, expresses himself as follows, towards the conclusion of the paper, (p. 228, § 7):—"Authors have mentioned other cases to which the operation is applicable, as in occlusion of the vagina, scirrhus uteri, &c. But these do not appear to me adequate grounds for so serious an operation."

Dr. Churchill suspects that with the older practitioners the operation may have been resorted to unnecessarily, as many of the patients were, in subsequent labours, delivered "pervias naturales;" and his opinion is very probably correct. Indeed, the first well-authenticated case on record is of that description. It occurred in Thurgovia, in 1500, when the patient's husband, a pig-gelder by trade, obtained permission from the magistrates to operate upon his wife, as the midwives and surgeons had stated that she could not be delivered in any other way. The section was performed, and the woman, when again parturient, was delivered in the natural manner.

It is therefore no wonder that so many early authors should have expressed themselves strongly against the operation upon the living subject, tolerating it only when the mother died undelivered, with a viable child in the womb. Thus we have Ambrose Pare, (1570,) Guillemeau, (1635,) Mauricean, (1672,) Sir F. Ould, (1742,) against the section. But the following authors approved of it when the pelvis was reduced to one inch and a quarter in its antero-posterior diameter:—La Motte, (1746.) Burton and Smellie, (1751,) Dr. A. Hamilton, (1775,) Lauverjat, (1788,) Denman, &c.

Lauverjat is said to be the first who made his incision in the linea alba. Whether the latter practitioners were right in supporting the operation may be gathered from the following figures, obtained, like the dates just mentioned, from Dr. Churchill's Essay:—1. Among British practitioners, in 40 cases 11 mothers recovered and 29 died, or nearly three-fourths. 2. Out of 37 cases where the result to the child is mentioned, 22 were saved, and 15 lost. 3. Among continental practitioners, out of 369 cases 217 mothers recovered and 152 died: viz.—1 in 2 1-3. 4. Out of 187 cases where the result to the child is given, 138 were saved and 49 lost, or nearly 1 in 4.

Taking the entire number, (409,) we find 228 mothers saved and 181 lost, or about 1 in 2¼; and out of 224 children, 160 were saved and 64 lost, or about 1 in 3½.

Dr. Churchill, very justly distrusting some of the earlier accounts, takes a glance at the cases recorded since 1750, and finds 316 operations, upon which 149 mothers recovered; and out of 182 cases where the result to the child is mentioned, 129 were saved and 53 lost.

These are certainly very cheering figures, and when we consider that in the tables which have been published, many women are stated to have undergone the operation three, and even four times, we may well be inclined to side with Dr. Churchill when he says,—"After a careful examination of the cases on record, I think we may fairly conclude, that as so many women have recovered from the operation, it does afford a chance to both mother and child, and that, therefore, we may be justified in having recourse to it; but that as the danger is much greater than from any other operation, we should not be warranted in

* In the *Edinburgh Medical and Surgical Journal*, for July, 1851, will be found an account of three cases of Cæsarian section; one unsuccessful to mother and child; the second favourable to child, who died at seven months old, and leaving the mother alive with artificial anus; the third a very startling case, embodying embryotomy, rupture of the uterus, and Cæsarian section. The account of the case closes with these words,—"I visited her yesterday for the last time, which was the 29th day since the operation, and found her sitting up by the fire, directing the domestic affairs of her family."

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performing it, if there were a prospect of success by other means."

It is plain that such an operation offers a chance of success where both mother and child would certainly die. We heartily congratulate both the physician-accoucheur and the operating surgeon upon the success of the present case, of which we proceed to give a few details.

The patient is twenty-eight years of age: has been married several years, and has had five children. For the last seven months, being the commencement of her present pregnancy, she has been troubled with pain in the uterine region, with discharge; she consulted several medical men, and was admitted into Guy's Hospital, June 4th, 1851, into Lower Petersham ward, under the care of Dr. Oldham, being then in the seventh month of gestation. The os uteri was found occluded by scirrhous disease, and Dr. Oldham, not thinking it advisable to resort to the induction of premature labour, considered that at the conclusion of gestation, by puncturing the membranes, the os would dilate to allow of the passage of the child; but the mouth of the uterus proved unyielding.

The steps of the parturition were as follow:—On July the 2nd, labour pains became manifest, and an examination being made, no os uteri could be felt. Dr. Oldham made the patient inhale chloroform, the distress being very severe; the second time that the anæsthetic agent was inhaled being about three o'clock in the afternoon: a discharge of a small quantity of liquor amnii took place before she was under its influence. The patient, however, soon fell asleep, and continued in that state for about an hour and a half, when she awoke with a severe bearing-down pain, and she stated that she was sure labour was coming on. The liquor amnii was in the meanwhile escaping, and the fœtus very lively, its movements being plainly visible.

She had now from six to eight pains an hour, and was ordered a dose of morphia. At twelve o'clock at night, the pains rather increased in strength and frequency. No os could be felt, although it was imagined to be very far back, where rather a larger depression than elsewhere was noticed. The latter appears to terminate at the os internum, which is entirely shut up by malignant growth.

Dr. Oldham was sent for at half-past one A.M., as the labour was steadily progressing, and on reaching the hospital, he decided upon Cæsarian section, to which measure the patient at once assented. Mr. Poland having been requested to operate, chloroform was administered, and the urine drawn off. Her pulse was not quickened, having throughout been about 100, and her respiration was scarcely hurried. Mr. Poland made his incision from below the umbilicus to within an inch of the symphysis pubis; the peritonæum was opened on the director, and an incision in the same direction, but somewhat shorter, made through the body of the uterus. The membranes came first into view; these were ruptured, when a small quantity of liquor amnii escaped, and then the child (a girl, of rather small dimensions) appeared, with the back towards the mother's abdomen, and the head at the brim in the first position.

Dr. Oldham first seized the right arm, but as he could not in this way deliver the child, the opening of the uterus being small, he brought out the feet, and then, with some difficulty, the head, the extraction of which required the incision to be slightly enlarged; the placenta, membranes, &c., were very soon afterwards likewise removed. Little blood was lost, and the unimportant hæmorrhage was arrested by sponging with great care. The wound, uterus, and peritonæum were carefully washed with warm water, the integuments were brought together by means of seven sutures, with strips of adhesive plaster between each, and the whole gently compressed with lint, pads, and plaster.

The bleeding through the vagina was very slight. The breathing and the pulse remained normal during the whole period. At four A.M. the patient had recovered the effects of the chloroform, and expressed herself as having been in heaven. Three grains of opium were administered. She had not felt anything of the operation, except a smarting pain, as of a cut over the umbilicus, with an occasional twinge of the after-pains.

She kept slightly dozing until about a quarter past five, when she was awoke by the crying of her child, which, although she had heard before, she did not notice till this time. She now turned very anxiously towards the student on the watch, and inquired whether that were her child, and could scarcely be persuaded that such was the case.

The patient slept at intervals. She had grain doses of opium, and upon asking, towards seven, for some nourishment, a little port wine in warm water was given. At nine she was free from pain, took some beef-tea, and a piece of ice. Dr. Oldham saw her at one in the afternoon, and drew off some high-coloured urine.

A good deal of lochial discharge now took place per vaginam, and the opium was continued. Towards the evening the pulse rose, and became sharp, and there was slight tympanitis. Dr. Oldham saw the patient at ten P.M., when slight tenderness in the right side was complained of. Opium during the night every third hour; beef tea and ice. The urine was regularly drawn off, and on the next day there was rather more serosanguineous fluid from the wound.—In the afternoon the patient vomited a small quantity of greenish-looking bile. She went on very favourably, but, on the fifth day, there was a good deal of sanguineous discharge from the vagina. The patient progressed very satisfactorily; a great portion of the lochia came through the wound.

On the ninth day Mr. Poland removed the sutures; the wound gaped somewhat, and a good deal of fœtid lochia escaped; strapping and a poultice were applied. On the eleventh day, the upper portion of the wound was uniting; the lochia were lessening in quantity. The patient is now, two months after the operation, in a very satisfactory state. The wound is entirely healed, all but one inch in extent, which was granulating fast on the day she was discharged. The child is likewise thriving, having been placed under the care of a wet nurse.

One very interesting question will ever be started, whenever the Cæsarian section is being discussed—viz., whether induction of premature labour, in cases of considerable narrowing, would not be the proper course, rather than allowing the fœtus to reach its full development and necessitate extreme measures. The present case, however, is quite exceptional, and it is evident that artificially exciting labour would have been hazardous, the more so as it could not with certainty be foreseen that the mass would resist the dilating stage of labour.

We cannot conclude without quoting an extract which appears in the *Medico-Chirurgical Review* for July, 1851, as taken from the *Revue Med. Chir.* of Paris:—

"While the Cæsarian section has never yet succeeded in a Parisian hospital, and while of more than twenty women operated upon in the Brussels Hospital by Seutin and Van Huevel, not one escaped, it may seem surprising to find a Belgian practitioner maintaining, and at present without contradiction, that he

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has resorted to it *thirteen times* without ever losing a case. All his patients, however, inhabited the country; and M. Hoebeke attributes his success to his resorting to the operation sufficiently early, prior to any sign of phlegmasia being set up—the usual cause of death being, in his opinion, the not resorting to it until the favourable moment has passed away."

LIVERPOOL INFIRMARY.

(Reported by Mr. FLETCHER, House surgeon.)

Rapidly-formed Abscess in the Psoas Muscle; Pleurisy; Death, and Necropsy.

JAMES J——, aged twenty-two, slightly made, of middle height, and pale, cachectic aspect, admitted as a patient of Dr. Turnbull about the beginning of October last. He complained of a dull, continuous, deep-seated pain in the left renal region, arising, as he thought, from a strain which he had received in lifting a sack of bran. He complained, besides, of a feeling of general lassitude, which was at that time referred to the unhealthy nature of his employment—that of a baker. Tongue reddish, with a glazed surface at the edges and tip, but furred towards the posterior surface. Purgatives and tonics were first given, and after his admission leeches were repeatedly applied to the painful spot. These gave manifest relief. In a few days I perceived a slight prominence immediately below the last rib on the left side, and I thought that I could detect a slight feeling of fluctuation. No symptoms, however, tending to elucidate the case occurred until the 15th of October, when he complained of pain in the left side and difficulty of breathing. At two A. M. next day I was called to him, and found him seated on the edge of the bed, unable to lie down, deadly pale, with perspiration pouring from his face, panting for breath, scarcely able to speak, complaining of the most exeruciating pain in the left side, with a feeling as if every gasp must be the last. The heart's action was extremely rapid and tumultnous; the pulse full and hard. A large dose of sulphuric ether and laudanum relieved him slightly; opium was ordered every three hours. At ten A. M. the pallor, difficulty of breathing, and excited action of the heart, still continued; pulse 160 per minute, full and hard; a murmur audible with the first sound; dulness over the left chest, and friction audible in the left infrascapular region; breath sound, harsh and tubular. He was ordered one grain of opium and five grains of calomel every three hours. The symptoms continued unabated till the evening, when he died.

On the 18th of October a post-mortem examination was made. *Chest:* The left pleural cavity was found filled with turbid yellow serum, with a quantity of flakes of yellow, fibrinous-looking matter floating therein; the surfaces of the pleura covered with a layer of shaggy coating of tough yellow lymph. The lung was compressed, flattened, and so reduced in size by the pressure to which it had been subjected, that its bulk was equal only to that of twelve ounces of water. The right lung and pleura were healthy. The pericardial fluid was augmented in quantity, and contained a little flocculent lymph, which was slightly adherent in some places. The heart's structure and valves were healthy. *Abdomen:* The left kidney was thrown farther forward than usual, and was closely adherent to all the circumjacent structures. On cutting it away, an abscess was opened, containing a considerable quantity of healthy pus, together with some grumous fluid. This abscess was found to extend upwards to the under surface of the diaphragm, so that on placing one finger in the upper end of the abscess and another in the cavity of the pleura, it seemed that the only septum between the pleural cavity and the abscess was a membrane scarcely a line in thickness; downwards, it extended, in the substance of the psoas muscle, to the groin, not producing here, however, any external prominence. The spine was carefully examined, and found healthy; but on the anterior surface of the last rib was a spot, nearly half an inch in length, from which the periosteum had disappeared, leaving a rough surface of bone here; around this spot the periosteum was slightly thickened, and easily detached. The kidneys and other abdominal viscera were healthy.

The most interesting question arising from this case is as to the cause of abscess. Was it caused by the rupture of a few muscular fibres by violent exertion? and was the periostitis of the rib an effect, or was it the primary affection? and as to the cause of the pleurisy, might it not be from the close proximity of the abscess?

OPENING OF THE MEDICAL SCHOOLS.

ADDRESS TO STUDENTS.

WITH medical students the new year commences on the first of October, and that period is anticipated with great anxiety by many who probably never before visited the vast metropolis. It is a time characterized by excited hopes and anticipations of future honours on the part of the student, and of anxiety for his moral welfare on the part of the parent. A student generally before leaving home is furnished with introductions from those members of the profession who still remember with gratitude and regard the attentions they received during their own studentship at their alma mater, and who still think that the most perfect system of study is carried out at the institution where they themselves were educated.

Students of medicine, in the selection of an hospital and school, are influenced by a variety of circumstances: one, for instance, attends a particular school because his friend Dr. or Mr. A. B. was educated there, and who has kindly furnished him with letters of introduction to some of the lecturers; another, because a popular physician or a dashing operative surgeon is attached thereto; another, in consequence of the fees for hospital practice and lectures being lower.

In making the selection, we would advise the student not to be guided by the magnitude of the establishment; for some of the most distinguished physicians and surgeons have been educated and have subsequently taught at the smaller hospitals, both at home and on the Continent.

An hospital or school is not to be judged of, as a preferable place of instruction, by its size, or the number of beds it contains. These are but secondary considerations. Indeed, in very large schools the student is liable to the great disadvantage of being entirely unknown to his teacher, or of being too far away from the anatomical or chemical demonstrations, to derive any benefit from them. On the other hand, there are attached to these large schools museums and laboratories, to which the student can resort, and make up for the evils of overcrowding and numbers. But in the choice of an hospital, the regularity of attendance of the medical officers, and their clinical

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instruction, are the main features of importance.

The *practical* part of our profession is demonstrative, and all crowded institutions labour under a disadvantage, on account of the distance at which the students are placed from the subject under consideration. A few cases well observed or recorded, are more valuable to the future practitioner than myriads hastily passed by. The great SCARPA had but fifteen beds in his clinical hospital.

"Perpetual students" should be eligible without additional fee for the offices of house-surgeon, dresser, and physician's and surgeon's clinical clerk. These important situations should be bestowed according to merit, and not sold for money.

In some of our metropolitan hospitals the governors have acted with a wise liberality, in affording aid to those young members of the profession whose prospects of advancement have been checked, perhaps by unavoidable misfortune on the part of their parents, or perhaps, even, by the loss of a parent during their pupilage. For such acts as these the support of the profession is due, provided that proper circumspection be exercised, in forwarding the interests of those only who, by education and conduct, are deserving of assistance We allude to the establishment of free scholarships. This excellent example of liberality was first set by the governors of the Charing-Cross Hospital, who, twelve years ago, established six free scholarships annually; and they have had the satisfaction of witnessing the progress of some of the most rising members of our profession, some of whom have now attained the highest distinctions in the learned societies and corporations of the metropolis. The example set in the Charing-Cross Hospital has been followed at several schools in London.

In the prosecution of his studies, the pupil must bear in mind the absolute necessity for perseverance and industry. He must not pursue too many subjects at the same time, but commence with those which the curricula of the examining boards require, and study them thoroughly; for if he confuse his mind among the various collateral branches which appertain to medicine, he will become harassed and bewildered,—perhaps attacked by illness, and unable to pursue his studies to the termination of the course.

The subjects to which the student's attention is to be particularly directed during the first winter session, are chemistry, anatomy, physiology, and hospital practice. We will offer a few suggestions which may be conducive to the student's interest, and facilitate his selection of a school:—

Anatomy.—The basis of medical and surgical science is to be found only in a knowledge of anatomy, and for a thorough acquaintance with it the student must depend upon his own exertions. He should select a school where he can *see* and be *near* to the *demonstrations and dissections*. In the dissecting-room he must avail himself of every opportunity of displaying the parts of the body, in their order and relation to each other, must familiarize himself with the use of the knife, and practise the various operations upon the dead body, in order that, when called upon in his future life, he may operate with ease, precision, and celerity; for upon his skill depends the well-doing—nay, even the life of his patient.

Anatomy learned from books and in the lecture theatre only may enable a student to pass his examination at the College of Surgeons or at Apothecaries' Hall; but in after-life a knowledge of it so obtained will be found of little utility in practice. What is it that gives confidence to the physician in forming his diagnosis? A knowledge of anatomy. What enables the surgeon to traverse securely with his knife parts in which organs essential to the patient's existence are placed? A knowledge of anatomy. What was it that raised an ASTLEY COOPER, and a LISTON, to the proud pre-eminence they occupied, not only for their operative skill, but for their certainty in diagnosis? A knowledge of anatomy. In all times the greatest achievements in surgery have been performed by surgeons who have been distinguished by their acquirements in anatomy. All the splendid operations which give a name and character to the science of surgery have been based upon anatomy,—a perfect knowledge of the structure and functions of the parts concerned.

Physiology, in its extended sense, may be defined as the science of life, which investigates the functions both of plants and animals. It explains the processes by which plants convert inorganic materials into food for man—also the law by which each species in the scale of creation is perpetuated. A knowledge of physiology also is invaluable to the physician at the bedside, inasmuch as it defines the healthy action of the several organs in the body, and enables him to test the several doctrines, systems, and theories which are so frequently brought under his notice. If they will not bear examination by the light which physiology throws on them, they are only to be looked upon as the frauds of charlatans or visions of the enthusiast. No subject requires to be more judiciously handled than physiology; and its practical application to the investigation of disease demands a large share of experience on the part of the teacher. Students will do well to distinguish between lectures on what we may term abstract physiology, and physiology applied to practice, for the former can be studied as satisfactorily at home as in a theatre.

Chemistry.—This subject has attained a most prominent position in the education of medical men. The researches of LIEBIG on the continent, and of PROUT and others at home, have established a new era in the history of our profession. The application of chemistry in the elucidation of the problems of physiology, and in the treatment of disease, is becoming every day of more importance. The student should inform himself upon the subject of each lecture, by careful reading, before entering the lecture-room. The subject is practical and demonstrative; and having gained a previous knowledge of the intention, he will be better enabled to follow with his mind the various mani-

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pulations by which the statements of the lecturer are proved, and which he can afterwards repeat in the laboratory by himself.

The more advanced student will attend to the lectures given by the teachers of the practice of medicine, surgery, and obstetricy; and these lectures, we regret to say, are too often spun out to make up the hour, and complete the "course." The fluent, ready, off-hand talker is by no means in all cases a good teacher; indeed, he is often the worst instructor. The student, however, should never hesitate to make inquiries of his teacher respecting points which may not seem clear, or have been imperfectly developed. It is too much the fashion with some lecturers to isolate themselves from the students, and to think that they have performed all the duties of their office by talking for an hour at a distance, and hurrying off to other engagements immediately afterwards. If lecturing were always as instructive as it ought to be, "grinding," or private instruction, would not generally be so necessary to gentlemen preparing for their examination; but the truth is, the "grinder," as he is called, places facts and theories before his audience in the shortest and clearest possible manner,

> "Stripped of their vain equipage of dress,
> Or learning's luxury, or idleness."

He holds, moreover, daily examinations—undoubtedly one of the most forcible and ready means of engrafting facts on the mind of the student. Lecturing, except when the subject is demonstrative, should be more catechetical than it is; and even anatomy and chemistry are made too much like abstract sciences. But it is at the bedside that the knowledge acquired in the lecture theatre and the dissecting-room is to be brought into active use; and here the student should lose no opportunity of studying disease. It is not from books that the experienced eye of the physician has learned to detect, in some cases, even by a glance at the countenance or the posture of the sufferer, the nature of the malady under which he labours. The "learned finger" has been habituated to the various modifications which the pulse undergoes, and it is only by strict and constant observation that the student can expect to arrive at any excellence in diagnosis. Undoubtedly, men are not all gifted alike, and the remark of Sir Joshua Reynolds, that "labour only had made him superior to others as a painter," must not be taken in its full extent; yet it is incontestably true that without labour in the profession of medicine, natural gifts do but run to waste. But with industry, all difficulties are overcome.

No man has ever risen to just eminence in our profession by any royal road. The great John Hunter is held up as a pattern of industry even by the laity; and had he been an idler, instead of the constant and indefatigable labourer he was, we might have reaped no fruits from his immortal genius. Sir Astley Cooper declared before the Parliamentary Committee, that even amidst the toils and anxieties of his really enormous practice, he never allowed a day to pass without the use of the dissecting-knife, in the dead-house; and the late Mr. Liston was daily occupied in making preparations for his museum. These masterly operators had worked their way up to the

> "Steps where Fame's proud temple gleams afar,"

by constant and unwearied exertion. The lightness of touch, the delicate manœuvre, the fearless but unerring incision, were the results of what the last-named great man called "the education of the fingers," an education carried on for years at the expense of great labour and perseverance. It is to his own industry, then, that the student in medicine must be mainly indebted for his capabilities as a practitioner; and the place he chooses at which to follow his studies, is of less importance than his being true to himself.

We advise the student, when studying disease at the bedside, to take every opportunity of eliciting information from his teacher, whose duty is not merely to treat the disease, but to point out to his followers the symptoms, explain the rationale of his treatment, pronounce his prognosis, and, if the disease tend to a fatal issue, indicate the appearances to be expected post mortem. An experience of the physicians and surgeons of our hospitals, leads us to believe that all questions from a really industrious student, are not only answered kindly, but the teacher is pleased to see an interest excited in his pupil. The information imparted in the answers to such questions is instructive to all who listen.

Medical and Surgical Practice at the Hospital.—In place of being fields of observation and experience, the wards of the hospitals, more especially of the larger ones, are little else than *lounges* for the idle, who themselves gain no knowledge of disease, neither will they permit those who are industriously disposed to avail themselves of the opportunities afforded. There is no greater abuse, in the whole system of medical education, than in the manner in which the duties of both the officers and students are discharged. The former are irregular in their attendance, they gallop through the wards, whisper a few inarticulate words to the clinical clerk at the bed-side of a patient, and pass on to the next. Two-thirds of the students do not even see either the patient or the medical officer, and know nothing about either the nature of the disease or the treatment. The system of clinical instruction—the most important part of the education of the student—the only safeguard for the public when he shall be ushered into practice—is less cultivated in our hospitals than any other portion of the curriculum of medical study. There is something rotten in the state of our corporate bodies, or they would devise some means for remedying the evil. Clinical teaching in the three great departments of medical science—viz., in Medicine, Surgery, and Midwifery—ought to be afforded by all institutions professing to furnish the student with the means of obtaining a knowledge of his profession, and in the selection he will do well to bear in mind these observations

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Neither the wards, the lecture-theatre, nor the dissecting-room, should be overcrowded. The pupils should not amount to a number larger than the officers and lecturers can take an individual interest in, otherwise the system of education becomes a system of lecturing rather than of teaching.

The "prize system" is fraught with much evil, and in many instances is a "mockery, a delusion, and a snare." The object of study is the efficient treatment of disease at the bedside, and this is to be obtained by the strictest attention to what has been called the demonstrative part of teaching. The prizeman in one branch, or even in many, may be really a very ill-educated man, so far as the practice of his profession is concerned; whilst he may for ever have ruined his health by a struggle for foolish distinctions, a certificate, or a medal. The examinations for these "distinctions" are so conducted in our schools of medicine as to afford no kind of test of the practical knowledge of the candidate; and hence a student, with nothing but a retentive memory, may carry off a prize, even of the highest kind, and have owed his success, not to any practical knowledge of the subject in which he has been examined, but to a knowledge obtained from books. It is notorious that prizemen generally are not superior practitioners, and they are too frequently liable to the observation of a celebrated divine, regarding a learned but somewhat stupid brother preacher—"Sir, he has so many books upon his head, that they press upon his brain." We may illustrate the evils of the prize system by an instance which some years since came under our notice. The Gold Medal in the Practice of Physic of one of the largest metropolitan schools, was awarded to a student whose capacity was by no means of a high order, and whose general knowledge was lamentably deficient: he knew little of anatomy and physiology, and was unacquainted with the rudiments of chemistry. He had determined, however, to obtain the Gold Medal in the Practice of Physic—the highest honour in the school. Accordingly he learned by heart, "*verbatim et literatim*," the published lectures of his teacher. When his papers were presented for examination, it was at first supposed that he must have had a book with him in the room appointed for writing the essay; but this was found not to be the case. The medal was awarded to him, and he left the school with a "high honour," but ignorant of every branch of his profession. Let the student, then, not be lured from the legitimate path of study by the gewgaws and frivolities of medals and certificates. He has a high, a noble, and most responsible position to fill amongst his fellow-men, and we warn him against the remorse that may attend the recollection of hours misspent in the acquirement of imaginary distinction, at the expense of those really practical pursuits, the following of which, ardently and consistently, is as essential to his own success and reputation, as it is to the safety and welfare of his patients.

In concluding our observations, we beg to remind our young professional brethren, that in order to hold a position in society to which they are entitled in virtue of the profession to which they belong, they must deport themselves as members of a learned and liberal body. From long experience we have no hesitation in stating, that neither in our universities, law associations, nor in any societies where large bodies of young men are congregated, have we witnessed more courtesy and gentleman-like bearing than amongst the students of our several hospitals.

Whilst we inculcate a zealous and industrious use of the time devoted to study, we recommend a moderate amount of relaxation; for the brain, when too long kept in a state of excitement, is predisposed to become diseased. And we advise our young friends, therefore, during their stay in the metropolis, to avoid every haunt of dissipation and vice, and to bear constantly in mind, that if much depends upon their teachers, far more depends upon themselves, with respect to the position which they must ultimately occupy as medical practitioners.

THE BRANDING OF DESERTERS.

If the authorities at the Horse Guards really intend to carry out their monstrous order for branding deserters, by which army surgeons are to be converted into executioners, we hope they have bargained for the steady and unremitting opposition of the entire profession. The order is not only monstrous but absurd. It is not a year since the Military Order of the Bath was conferred upon the medical department of the army. Future Knight-Commanders will have, according to this order, to begin their career as the allies of the hangman. A new subject must be added to military surgery; students must be taught, not only how to heal wounds, but how to make them, according to the art and mystery of branding; a disgusting proceeding, hitherto carried out by the drummers. We cannot believe that this order will be seriously attempted to be carried into effect. If the attempt be made, we are sure that the surgeons of the army will refuse to be degraded by such an occupation. In this refusal we are confident they will meet the hearty sympathy and support of their civil brethren.—It seems incredible that such an order should have been promulgated at all.

The practice of branding at all is most barbarous and inhuman, unworthy of the age and country in which we live. Like the odious system of whipping, it should be erased from our criminal code. It is loathsome to contemplate the fact, that a clause of an act of Parliament exists according to which the flesh of living men is seared by red-hot irons. That act, however, never contemplated that the professors of the art of healing should carry its odious provisions into execution. Gen. Brown, and the parties who have concocted this order, must entertain a very imperfect notion of the sentiments of civil or military surgeons, if they imagine that any force can be found to make

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them prostitute their noble profession to such a disgusting purpose as that of mangling the bodies of deserters.

OBSTETRIC QUACKERY.

THERE is hardly a single department of knowledge, or any occupation to which men betake themselves, that has not been of late years the theatre of some of the most benighted opinions, accompanied with the worst corruption of human beings. As a past age was signalized by the revival of learning, so some would claim for the present time the distinction of the *renaissance* of ignorance. Quiet men of sense thought they lived with reasoning and reasonable creatures. Sacerdotal infamies practised on dying and feeble beings have staggered their optimism, and roused them from self-complacent illusions. They see now the mass of society steeped in ignorance, while a few active surpliced knaves turn the credulity of others to the profit of their own pride and ambition.

But the disorder in our own profession is not less, while the motive to it is certainly much more contemptible. Men without any merit of their own, would clutch ascendency and pelf by turning the ignorance of their fellow-creatures to the same account. Unhappily, society is here much more helpless. It is not impossible to enlighten human beings enough in the matter of religion to preserve them from the poison of the betrayer; but what hope can we have to see the instruction of mankind in the commonest truths of medicine, carried far enough to preserve them from the designs of quacks? It is from this ignorance of the community, as from a polluted spring, that the foul waters of quackery flow. Neither homœopathy nor mesmerism could exist by the side of knowledge. The uneducated have a poor chance against science in the hands of the crafty and designing, especially when their wits are sharpened by the powerful stimulus of gain; and this is no doubt the sole motive of the medical quack, whether within or without the pale of the profession. No vulgar ambition to rule steps in, to give a bad kind of illustration to the dishonest doctor. Pelf alone animates him to steal a march on his colleagues and competitors. To attain this end, every art is employed. The prejudices of the weak, as well as the errors of the ignorant, are diligently watched and carefully plied. The quack bids over the heads of his neighbours in religious cant as in other things. Of this, the pages of THE LANCET contained an example derived from the Hospital for Women, some months ago, which, to use a common phrase, may be called "rich." Quacks, also, do not disdain to employ touters, and such instruments are especially useful to those who wait on the female sex. It is thus that men are raised to great stations in practice, without having given to their profession a single proof of knowledge or ability to justify their position. It is with pain we write it, but it is most true, that the men who follow midwifery exclusively have been singularly guilty of the sin of quackery. Succeeding by dint of female patronage, and placing little reliance on merit, which they rarely possess, they grapple at every novelty, and follow the example of the fashionable French physician, who thought it wise to employ any remedy *pendant qu'il guérit*.

The case related by Dr. COPLAND, in the last volume of the *Medico-Chirurgical Transactions*, is well known. An elderly maiden lady, with a paraplegic affection, was persuaded that her malady was owing to disease of the womb. In vain her wise and learned physician protested against this error. The patient, as usual, was eager for cure, and the obstetric quack was there to promise it. Cruel and disgusting violence was used to reach the womb through rigid and unyielding parts.—The patient was intensely disturbed, and died, in a few hours, of an aggravated attack of her cerebral affection; but the womb and its appendages were found, as might have been expected, free from all trace of disease. We believe that this poor woman was decoyed to her death by the wife of a right reverend Bishop, who, notwithstanding this frightful event, is by no means cured of her spirit of meddling, but carries her favourite quack to the wives of all the clergy in his diocese.

We do not know a heavier crime than the abuse of medical confidence. The trust in a physician is so entire, its betrayal is attended with consequences so extensive and so dismal, the suffering is so immediate and so directly under the eyes of the observer, that a heart of adamant alone can resist the appeal to pity, and continue to make a trade of the distress and destruction of our fellow creatures. Lawyers may hold it to be no crime in law, but men of sense will surely ever consider it the blackest in the whole catalogue of human offences.

A Glance at the Introductory Lectures

DELIVERED AT THE VARIOUS

MEDICAL SCHOOLS IN LONDON

AT THE OPENING OF THE SESSION 1851.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

THE lecture introductory to the course of medical studies to be pursued by the students of this hospital and college, was delivered at seven P.M., by Mr. SKEY. Several of the authorities of the hospital were present, as also the entire medical staff. The theatre was crowded.

Mr. Skey commenced by saying that he had accepted the office of lecturer, on the present occasion, with much reluctance, and had endeavoured to prevail on some one of his colleagues to take his place; but this they had one and all positively refused to do. He spoke of the importance of the office of the physician in administering to the wants and comforts of suffering humanity, and said that only one office was higher—that of the minister of religion. It was not, however, a calling which those who embraced were always actuated by the highest motives, or were endowed with the highest intellects. He questioned whether a satisfactory answer generally could be given to the question, as to why a student chose the profession of medicine in preference to others; and

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he went on ingeniously to show, that what might be called a natural inclination to the calling rarely, if ever, existed. He showed that excellence, in any one branch of medicine or the collateral sciences, did not give this natural inclination; and gave instances where first-rate dissectors had been bad anatomists, and excellent chemists ignorant of the action of remedies. He considered the highest attributes for a physician were the genius of observation, and the knowledge and power of adapting remedies so as to cure a disease. But in addition to these, a practitioner, to be successful, must have enterprise and independence—enterprise to carry out a new plan of treatment which might suggest itself to him, and independence sufficient to thwart, when necessary, the influence of authority. He showed that men generally did not think for themselves, but bowed, "some to the fascination of a name"—some to eccentricity bordering on insanity, as in the case which he instanced of the late Mr. Irving, who, by the force of a certain kind of eloquence and talent, influenced vast numbers in following him in his strange opinions and practices. It was want of independence of thought which gave rise to this and other kinds of religious and political delusions. The remedy for evils of this kind was education, and he trusted that the time was rapidly approaching, when every student of medicine would be prepared for his studies by a sound preliminary education.

He then proceeded to give advice on the intellectual and moral training necessary for the formation of a good physician. School knowledge was essential, but the great basis on which their success as practitioners must rest, would be the careful and attentive observation of diseases at the bed-side. It had often struck him that the base of the knowledge of disease was too large for the superstructure, and the proper remedy for such an evil was the study of disease in the wards of the hospital.

With respect to the motives which influence the medical practitioner—the science of medicine and the love of independence—the latter was the more common. And it was praiseworthy. Success in the profession was not always the result of knowledge, for many practitioners but imperfectly acquainted with their profession, gallop up the hill of practice, from the possession of certain social attributes not essentially necessary to the practitioner, but harmless in social life. He illustrated this by mentioning a case in which a surgeon was advertised for in the West of England, the advertisement concluding with "a gentleman who hunts will be preferred;" and he related an instance in which he had been requested to recommend a successor to a country practice, one of the necessary qualifications for which was that he should play a good game at whist.

He mentioned these instances to show that social qualities might sometimes take the place, as it were, of professional knowledge, in helping on the practitioner; but he cautioned the student not to trust to these, but to cultivate assiduously his professional studies, and owe his success to more legitimate means.

He then proceeded to show, that as the practitioners of medicine were the most independent of professional men, that for the time their patients were wholly in their hands, a nice sense of honour and of justice was essential to the medical character. He urged upon the students the exercise of the social virtues, and to uphold the justly high character of the school of St. Bartholomew's, so that their successors might not only worthily follow in their footsteps, but look up to them as examples. After making some remarks on professional etiquette, he concluded an eloquent address, amid great applause, by drawing a picture of the *beau ideal* of a gentleman.

The company afterwards repaired to the great hall in the hospital, where refreshments were served up. Some very beautiful specimens of drugs from Mr. Battley's were exhibited, as were also a number of rare preparations and some cases of surgical instruments. Among the foreign visitors was M. Langenbeck, the successor of Dieffenbach at Berlin.

CHARING-CROSS HOSPITAL SCHOOL.

Mr. Canton, the lecturer, commenced his address with a sketch of the various branches of knowledge to which the student will have to devote his attention, and then showed the close relationship which existed between them, and how the study of one subject naturally led to further investigation of others. The intimate connexion of the practice of medicine with that of surgery was dwelt on, and illustrations given of the importance of associating the two studies. Clinical information was especially recommended, and the much-neglected habit of making notes of disease at the bed-side of the patient was strongly insisted on, as one of the greatest utility.

"The notes should be at first brief, but explicit; increase of experience will confer facility of expression, which time and observation will enable you to correct and amplify; whilst a steady perseverance in this system will ultimately find you in possession of a large body of well-recorded cases and observations, which have, as it were, been insensibly transferred to mental tablets, and a store of information thus amassed, which brings with it a just claim, hereafter, to the proud title of a skilful practitioner."

The deportment of the medical man in the sick chamber was commented on, and kindness to the poor, both in health and sickness, enjoined.

"By this kindly consideration much may be accomplished; and we should never forget, that in the treatment of the sick in hospital, and at their own miserable dwellings, we have not only to combat with illness, but to attack it in the formidable garb of associated poverty. Disease and want are in league to destroy; skill and kindness should combine to preserve. In your attendance upon the sick, you should be cheerful, but not frivolous; attentive, but not obtrusive; and determined, though not ungentle; and you may ofttimes do as much by thus instilling a confident reliance, as by directing an appropriate medicine."

In speaking of the necessity of attending to study, and mastering difficulties by degrees, it was observed, that "no sudden resolves or quick actions, as a general rule, were commendable: safer is it to travel along the equable path of knowledge with measured pace and becoming confidence, than to rush headlong to the goal with hasty step and overweening reliance: remember the fable of the tortoise and hare—adopt the motto '*Festina lente*.' I would advise you to enter upon your studies with a resolution bent upon their pursuit in the manner they have been commenced—a manner to be characterized by patience and perseverance, but free from that injudicious ardour which would overleap difficulties at a bound, and seize upon knowledge at a grasp. Such undue efforts are profitless and enervating; the mind's power fails under the exertion, and apathy, usurping the place of anxiety, becomes mated with ignorance. With the talented author of 'Proverbial Philosophy,' I would say—

'Let the cool streams of prudence temper the hot springs of zeal;
So shalt thou gain the honourable end, nor lose the midway prize;
So shall thy life be useful and thy young heart happy.'"

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In referring to attendance at lectures and examinations, it was remarked:—

"Your entrance to a lecture commenced is an annoyance to the teacher, an interruption to the studious, and an act of injustice to yourselves. During lecture-hour, let attention, observation and reflection be your attendant guides; and whilst profitably employing the fleeting time, bear ever in recollection that this dawning assiduity is the fair herald of a meridian sunshine of success; but levity of manner and habitual frivolity bespeak instability of purpose and littleness of mind; they are the ignoble parents of a triple offspring—negligence, ignorance, and want. At examinations you will have the opportunity of judging of the knowledge you have already acquired, or of estimating the deficiency you have yet to supply. At these ordeals, the intelligent reply, whilst the boastful are dumb: the industrious are here brought to light, whilst the idle remain in self-created obscurity; and little are to be envied the feelings of that student who could leave the scene of his silence with a pleasantry on his tongue, without annoyance at his heart."

The conclusion of the lecture ran thus:—

"The journey-end of your pupilage will be rewarded with that becoming satisfaction which engenders reliance upon self, has sprung from merit, and been fostered to maturity by perseverance. You may then look back upon the past with pleasure—towards the future with hope. Bear also in mind, that it is not you alone who will feel the pleasure of this well-earned success: from many a tongue will flow the words of gratulation and approval; many a heart will bound with pride at the joyous tidings; and, above all, your return to home will be greeted with the glowing reward of increased affection, when, with honest satisfaction, you resign the trust so confidingly reposed in you, proudly feeling that you have neither squandered prodigally your time, nor lavished unprofitably, it may be, the hard-earned means of an anxious parent."

GUY'S HOSPITAL.

The commodious lecture-room of this hospital was at two o'clock crowded with a large audience of present and former pupils, friends, &c., who greeted with the utmost enthusiasm the governors and medical officers, as these gentlemen entered and took their seats. Dr. Babington was warmly greeted, and began by stating that his present task had been often performed, but that, though the subject was ever the same, the audience underwent changes, and that there were, besides, some truths which bore repetition, and were well worth recollecting.

The lecturer proceeded to give an historical sketch of the school, of which Dr. Saunders, in 1758, had been the founder. The advantages offered by this large and wealthy hospital were then held out: its 500 beds; the various diseases admitted; the wards for the diseases of women, of children; the Maternity, which counted one fifty-secondth part of all the births in London; and last, but not least, the new building, which is to afford room for 300 beds, and is to open next year. Medical science, not being an exact one, could only be acquired by the constant observation of cases, and these were here in abundance. Nor was it unimportant to the student that the wealth of the institution put all niggardliness out of the question.

Dr. Babington then passed a deserved eulogium on the late treasurer, Mr. Harrison, to whom Mr. Dobree was so worthy a successor, and gave a description of the several museums with which the hospital is enriched. The wax models, the pathological specimens, drawings, diagrams, casts, &c., were passed in review; and the lecturer pointed out that the dissecting-room had, during the summer, been transformed into a laboratory of practical chemistry. Here the two professors had given their attendance; and the pupils had so highly estimated the services of Mr. Odling, demonstrator of practical chemistry, that they had presented him with a piece of plate. Indeed, the benevolent Thomas Guy would have been highly gratified had he been able to raise the veil of time and see these results.

Dr. Babington next drew the attention of his hearers to the immense strides which have been made in the various departments of medical knowledge since the time of his own pupilage; and speaking of therapeutics, touched upon the improvements introduced by Dr. Owen Rees in the treatment of rheumatism, (lemon-juice.) The lecturer then took up the subject of preliminary education, which latter he strongly advocated; and concluded his excellent discourse by sound advice to the pupils as to the manner they should conduct their studies and the necessary recreations.

The audience broke up with marks of tumultuous applause.

HUNTERIAN SCHOOL.

The lecturer, Dr. Robert Barnes, began by discussing whether medicine admitted of being studied according to the same method of observation which was pursued in reference to any other science. If the method of observation were indeed the only true method, then it would follow that medical practitioners could not be called upon to accept the judgment of extra-professional persons in medicine; for it could not be from any trustworthy system of observation that such persons arrived at the authoritative opinions they expressed.

The lecturer exposed the fallacy of the legal profession in setting aside the testimony of medical practitioners in questions relating to insanity, showing that insanity was strictly a medical question, and beyond the sphere of the lawyer to investigate in all its bearings. He showed that the deplorable inconsistencies of the law, in its treatment of lunatics and its rejection of medical counsel, were the result of the disregard of the necessity of adhering to the method of observation in the study of insanity. From the bias of their education, lawyers were apt to overlook altogether the medical relations of insanity, and to regard it simply as a metaphysical question. Hence they set up arbitrary tests of insanity, corresponding with the dicta of judges and the technical language of the law, irreconcileable with the pathology of insanity. Among other deplorable evils resulting from the studied negation of medical evidence, was the fearful hazard incurred of making a wretched lunatic undergo the extreme penalty of the law. By this act, all prospect of future evidence of insanity is cut off. Regarding the frequent association of crime with insanity, this fearful possibility became a most powerful argument for the abolition of capital punishments.

The lecturer exhorted his hearers to avail themselves of the opportunities now afforded of prosecuting the practical study of insanity, to qualify themselves to bear their part in the struggle for the honour of the profession and the best interests of humanity.

The lecturer then adverted to another example of the neglect of the method of observation, which was the frequent occasion of bringing the profession into collision with a section of the educated classes. He

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considered it as beneath serious consideration to enter upon a refutation of the dogmata of that transcendental delusion, homœopathy; but he thought it worth while to point out the utter incompetency of legislators, clergymen, soldiers, and others, to decide upon the merits of homœopathy, and their presumption in denouncing the practice of rational medicine. He proved this incompetency by referring to the precepts of Dr. Whately, whom the globulists ranked among their most distinguished converts, and who had palpably stultified his own lessons in venturing upon the decision of medical questions. In particular, the late resolution of certain homœopathists, in declaring, by resolution, that their doctrines were in accordance with common sense, was unfortunate. The late professor of logic points out that "common sense" is but our second-best guide, and is never relied upon by any one, except in those cases in which he does not possess the advantage of having a system of rules. He says, *e. g.*, "A sailor [he might have said an archbishop] will perhaps despise the pretensions of medical men, and prefer treating a disease by common sense; but he would ridicule the proposal of navigating a ship by common sense without regard to the maxims of nautical art."

Dr. Whately also most pointedly exposes the fallacy of the appeal to supposed experience, which is so convincing to homœopathic converts, and so triumphantly referred to. "Nothing is more common than to hear a person state confidently, as from his own experience, that such and such a patient *was cured* by this or that medicine, whereas all that he absolutely *knows* is that he took certain medicine, and that he recovered." It might be added, that in the case of homœopathy he could not know that the patient even took the medicine supposed. The lecturer suggested that, instead of obtruding themselves upon the universities, the homœopathists should found a college of their own, and pointed out that they would require a separate foundation for a chair of homœopathic logic, and another for a new system of morals. The lecturer referred to the last disgraceful order from the Horse-Guards, as a proof of the ignorance of military men of the proper functions of medical practitioners, and of what is due to the profession. He ridiculed aristocratic pretensions in medicine. Hereditary wisdom extended to every department of knowledge. Medicine could not hope to escape. "Les gens de qualite savent tout, sans avoir rien appris."

The lecturer finally drew the conclusion that the time was not yet come to abandon the recognised method of inquiry, and urged upon students the necessity of reconciling their minds to industry, patience, self-denial, and courage—qualities pre-eminently required in the medical profession.

KING'S COLLEGE HOSPITAL.

Mr. Bowman delivered the introductory lecture. After some introductory observations, he spoke in general terms of the character of our profession as influential on its professors in comparison with some other occupations and pursuits. He then went on to show that its true dignity lies in the beneficence of its object, and that it pursues this object by rational means. That in doing this it tends to elevate man. He next spoke of the peculiar advantages for study which the period of studentship afforded, and of the responsibilities thence arising. He spoke of mental discipline, and the means of cultivating our powers. Mr. Bowman made some remarks on the study of medicine in its double character, regarded as a science and as an art. He limited the study of science to what he conceived to be its true line for medical students, and encouraged them to imbibe scientific tastes rather than to attempt to become profound in any one science *at commencement*. He then spoke of the dissecting-room and hospital; he pressed the necessity for attendance on them most strongly on the student, and he concluded with advice on the employment of his leisure, and application to books.

LONDON HOSPITAL.

The introductory lecture was delivered by Dr. Fraser. The apartments appropriated to the medical school, however conveniently arranged, are small, and the theatre scarcely holds more than a hundred persons; it was, however, completely filled, notwithstanding a very unfavourable state of the weather.

The lecturer divided his subject into four parts.

In the first, he paid a deserved compliment to the merits of the hospital to which he belongs: he drew attention to the qualities required in a student of medicine, showing that, in attaining and sustaining his position, the highest moral as well as intellectual powers are needful; especially noticing the necessity for a student having a full belief in the truthfulness of his high calling, for as he said, "a sceptic will be wanting in precision of practice; he may view with admiration the glorious fabric of medicine, raised by the patient industry of his forefathers, but, like a cathedral to the atheist, no holy emotions are inspired."

In alluding to the preliminary education of a student, he drew attention to the necessity of their acquiring a habit of close reasoning, and lucidity of style, thereby avoiding a too easy acceptance of facts, and consequently a loose generalization.

He animadverted strongly against the practice of professional depreciation, and upon the necessity for a medical man sustaining his self-dignity. He repudiated the idea that the study of medicine encourages infidelity, and ended this part by saying that the members of the medical profession had done more in the onward movement of civilization than any other class of men.

In the second part, he made some suggestive remarks; he contrasted disease with health,—showed that no line of demarcation can be accurately drawn between the two, for that insensibly the one runs into the other. This produces a high mental gratification, in the practice of the powers of diagnosis and prognosis, although causing a great difficulty in therapeutics, thereby forcing a practical application at the bed-side of the knowledge obtained at lectures and from books; hence he strongly inculcated the necessity for a frequent attendance in the wards of the hospital.

In the third part, he observed that although much had been done, there was still much to accomplish in the promotion of medical science; that we were, in reality, only on the outskirts of a vast and unexplored region; and he briefly alluded to the several points requiring further elucidation, honourably mentioning, in connexion with these different subjects, the names of his colleagues.

In the fourth part, the subject of which is well-timed, he humorously stated some of the bygone absurdities of quackery, and then contrasted them with the fallacies of the present day, showing that in the latter,

> "What is new is not true,
> And what is true is not new."

He stated that medical men have to depend upon themselves in their battle with quackery, and that from the government or the public nothing is to be expected; therefore anticipating for medical men "a hard struggle; for," as he said, "the enemy has been

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by our supineness allowed to establish a lodgment in the camp.

> 'Oh, bright shades!
> Oh, glorious Troy! the labours of the gods!
> Thrice stopp'd unmoved the monster in the gate,
> And clashing arms thrice warned us of our fate;
> But we, by madness blinded and o'ercome,
> Lodge the dire monster in our sacred dome.'"

He concluded, in an appeal to the aspirations of his junior hearers,—"each of you may, individually, most certainly collectively, advance the progress of medicine, and assist in giving it that place in science to which it is entitled and must ultimately attain."

Dr. Fraser was warmly applauded at the termination of his address.

SCHOOL ADJOINING ST. GEORGE'S HOSPITAL.

THE lecturer, Dr. SIBSON, addressed himself exclusively to the students, impressing on them the necessity of keeping constantly before them, during the whole of their studies, the fixed purpose of their student's career,—namely, to learn their profession so thoroughly as to make themselves sound practical men, and to fit themselves for passing their examinations. With respect to the preparation for examination, he expressed himself thus:—

"Let me earnestly entreat that you will not put off your labour for the examinations at the College and Hall until the last year. Learn thoroughly during each session the work assigned to you in your courses of study. Do not destroy your self-respect by idling now, and at the last rushing to the class of a gentleman who will and can, for a given sum of money, cram you so that you will certainly pass the College and Hall, and that often with *éclat*. A higher purpose in life is behind your examination than the mere acquisition of your diploma. Fit yourselves for the practice of your noble profession, and you will fit yourselves to pass your examinations, which are conducted so fairly and honourably, that you must pass them if you really know your profession. I do not object to the use of tutors during the course of your studies, but to the system of grinding an idle man up for his examinations during the last session. In pressing upon you continuous study, I feel impelled to protest against that baneful system which prevails both at the College and at the Hall, and which enables an idle, often dissolute young man, to pass his examinations after three months' cramming, thus earning the same diploma as the laborious student. An injustice is thus done to the lives and health of the people of this country, who, in consequence, sometimes come under the care of ignorant men. The College and Hall have both of late years done much to improve the course of study; but what avails it if they do not take effectual steps to ascertain that the student has actually gained each session the knowledge prescribed. It is the imperative duty of the College and Hall to follow and improve upon the good example set them by the University of London, to ascertain by examination whether a student is fitted by previous culture to begin to study medicine, and by an examination at the end of each summer session to know whether the student has really learned the subjects that have been assigned to him. Failing to pass such examination, he should re-commence with those subjects."

Dr. Sibson urged the students to love their work, to labour at it with intensity and perseverance, and to acquire habits of concentration. A previous knowledge of the elements of natural philosophy is of great importance; the correlation of the physical with each other, and with the vital forces, being now more than ever recognised. While a general knowledge of natural philosophy and natural history is important as an aid to the study of medicine, the energies must not be withdrawn from the profession by too eager a study of the collateral sciences. It is important each evening to study subjects of the day's lectures, and to bring them into keeping with those of the previous lectures, all along testing the knowledge acquired in the lecture-room and books by practical observation.

During the first year, in studying anatomy, it is important not only to learn a dead, but also a living anatomy; that each part, when learned, should be so combined with all the other parts as to make a living whole; that on looking at the living body, the exact parts in successive layers below and deeper than the skin, should be known, and that the mind should especially realize to itself both surgical and medical anatomy. Familiarity with the appearances under the microscope is now more than ever important; while the microscope ought to be diligently employed, its use ought not to interfere with the observation of the vital phenomena. Anatomy can only be known by dissection. In like manner, chemistry can only be learned in the laboratory; a sound but not exclusive knowledge and employment of organic chemistry is of practical use, but care must be taken that the treatment be not too chemical, the chemical forces being often more easily acted upon through the vital forces than the vital through the chemical. Surgery and medicine must be learned in the ward, at the bedside, and in the dead-house, lectures being of service to direct the medical and surgical studies. The observation of the vital changes witnessed in surgical cases in eye diseases is important for the comprehension of the hidden changes that go on in medical cases. In practising the profession, success may be attained either by practical knowledge or by cunning; the worker adopts the former plan; the idler, the latter. In the former case, you will have confidence in yourself, even in difficult cases; you will know how to meet disease; the more you are known and tested, the more you will be valued and confided in. But if success in practice is sought by mere artifice, audacity will carry a man through in slighter cases; but if he is known and tested, he is found out and loses confidence. However, the man who uses artifice will often succeed more quickly than he who seeks success by means of practical knowledge; but the latter plan is successful in the long run.

Dr. Sibson concluded his address by urging the student to aim high, to prosecute original research, to scrutinize all his cases, shunning routine, whether they be among the rich or poor, and to extend the boundaries of medical knowledge by adding to its common stores.

ST. THOMAS'S HOSPITAL AND COLLEGE.

THE large and handsome hall was occupied by about three hundred governors, students, visitors, &c., together with the medical and surgical and collegiate staff, and a little after eight in the evening Dr. LEESON commenced his introductory lecture. He first dwelt on the advantages to the student in medicine of referring to the experience of past ages, and also of cultivating a highly moral tone of feeling and conduct. He considered that medicine, ere long, might become ranked amongst the exact sciences, as are now astronomy and chemistry: he attributed the rank which these branches of knowledge have taken, and the discovery of the fixed principles by which their phenomena are regulated, to the employment of mathematical and arithmetical processes, and the Baconian system of reasoning with respect to them. He looked forward with satisfaction to the period when the same principles should be more widely applied in the study of the healing art, and he urged strongly the necessity of students in medicine having embarked in preli-

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minary mathematical studies with a view to this end. He congratulated the friends of St. Thomas's College that the voluntary preliminary examination which they had suggested to the students attending there, and which had been at first accepted by but few, was now submitted to by the majority. In particular, he drew attention to the vast advance which chemistry had made; in consequence of the rigid application of sound and philosophic principles to its study, wonders had been effected—as, for instance, those of the electric telegraph and of photography—which realized some of the wildest dreams of the alchemists or of oriental romance. In all the early vagaries of the human mind, some germ of truth worthy of being sought out was to be found; and he anticipated that hereafter strict reasoning and observation would unveil how far even planetary influence, some conditions of which were demonstrable, exercised any physical effect upon the inhabitants of this globe.

Returning to the subject of the medical curriculum, Dr. Leeson drew attention to the increasing stress laid by the Apothecaries' Company upon clinical medicine; but he warned his younger hearers that clinical lectures in the theatre are as different from clinical instruction in the wards of the hospital, as a chemical lecture is from chemical manipulation. Dr. Leeson recommended especially attention to practical instruction in the wards; and he considered that in many branches of medical science, lectures might well be superseded by private tutorial teaching, by reading, and by frequent examinations. He expressed his opinion, that in the medical curriculum, as laid down by examining bodies, attention to practical chemistry was postponed too late—that it ought to follow close upon the theoretical instruction in that science, and not be entered upon when the student's mind was more suitably engrossed by subjects not quite cognate.

The principal remaining feature of the address was Dr. Leeson's own view of what system would meet the demand for medical reform. He advocated (at least so we understood him) that all the present qualified members of the medical profession should be organized into one great medical university; that these members at large should choose their senate; that the present examiners of the examining bodies should constitute the first board to grant degrees, which board should be afterwards filled up from the body of the university; that the degrees granted should be those of Bachelors of Medicine, Masters of Medicine, (corresponding to what are now called general practitioners,) and Doctors of Medicine or of Surgery (corresponding to those practising as physicians and *pure* surgeons.) He believed that it would be easy to make arrangements with the old universities giving to the holders of their degrees *ad eundem* privileges. This was nearly the last subject treated of by Dr. Leeson, and with another eulogium on the Baconian philosophy his discourse terminated.

The assemblage afterwards took tea and coffee in the College Hall.

UNIVERSITY COLLEGE.

The introductory lecture was delivered at eight P.M., by Dr. Parkes, in the large Theatre. Dr. Parkes commenced by remarking on the importance of the transition period between youth and manhood, when the mind is being prepared for its future career, and on the necessity on all accounts that the aims of the future calling should be duly considered. After a brief allusion to the necessity for a class of men who should occupy themselves with the consideration of the numerous ills that flesh is heir to, he proceeded to consider the method in which the practitioners of medicine discharge the duties which have been imposed on them. He showed that the method for acquiring medical knowledge was the same as in all other cases—that both in pathology and therapeutics facts were first observed, and that, by induction, general rules were found to express their sequences. Dr. Parkes observed that the evidence necessary for ascertaining a therapeutical fact was the same as in all inductive sciences, and that as much certainty could be introduced into therapeutics as into chemistry or astronomy, by multiplying the observations under different conditions. He contended that a therapeutical statement, when based on sufficient evidence, was as much a truth as that water was composed of oxygen and hydrogen, or as that the earth went round the sun. The subject of quackery was then mooted, and after an allusion to the causes of quackery which originate in the quacks themselves, such as desire of riches or notoriety, Dr. Parkes proceeded to consider the circumstances which induce a certain portion of the public to look with favour on charlatanism.—These "objective" causes of quackery were said to be ignorance, incapacity for estimating evidence, and undue credulity; discontent on the part of the public with the necessary imperfections and with the inevitable failures of art; and a love of novelty and a disposition to be attracted by anything which is a departure from the beaten track.

It was also observed that always in the popular mind some great truth was floating about, to which some dogma of charlatanism might make a false appeal. Thus, the so-called homœopathic law was received with favour by some persons because they took it to be a generalization and an attempt at simplicity, whereas it is really a mere hypothesis and guess without proof or evidence. Other persons again were so struck by the extraordinary forces which modern science is bringing to light, such as electricity, magnetism, &c., and which they looked upon as instances of power almost disjointed from matter, that the absurd invention of infinitesimal doses does not appear incredible in their eyes. Dr. Parkes states that the only mode of argument likely to be successful with such persons, was to expose the utter want of trustworthy evidence which can be brought to prove the production of remedial forces by division and trituration of matter. It was then observed that quackery should teach us to have recourse always to that method of observation and experience on which our art is based, and which can alone protect it from the constant attacks made on it by unscrupulous persons. The subject of preventive medicine was then introduced, and the address concluded with a few observations on the intellectual and moral aspects of the profession.

WESTMINSTER HOSPITAL.

The introductory address was delivered by Mr. Holthouse. The lecturer commenced his discourse by giving the history of the origin and development of the several metropolitan medical schools. The four oldest of the hospital schools are those of the London Hospital, St. Bartholomew's, and the two Borough Hospitals, which were established in their present complete state towards the latter end of the last century, and in the chronological order in which they are here named. In the period intervening between their establishment and the schools at University and King's Colleges, and the smaller hospitals at the West End of London, numerous private establishments sprung up, the teachers of which were, for the most part, unconnected with the hospitals. The origin of

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some of these was shown to be connected with the defective arrangements and unhappy differences existing at the hospital schools, and their eventual dissolution was attributed indirectly to the rise of the London University and King's College. The schools at St. George's, the Middlesex and Westminster Hospitals, are of later date, and were founded chiefly to supply the wants and remedy the inconveniences experienced at these institutions on the dissolution of the private schools. The lecturer then proceeded to inquire whether the present system of unlimited tenure of office which prevails at our various hospitals is not a faulty one, and whether many of the evils which afflict the public, the profession, and the hospitals themselves, may not be traced to this source. Among these evils he enumerated the impoverishment of our old and more comprehensive charities by the rapid multiplication of dispensaries, especially those for particular diseases, which were got up generally by young men of talent and ambition, who were debarred the coveted honours of our hospitals; the jealousy and ill-feeling engendered by uncertainty among the expectants to office, and the hardship to those who, already occupying subordinate offices at our hospitals, are too long kept from the honours and emoluments of the higher grade; and lastly the loss of much valuable talent where it could be most effectively exerted—viz., in and for our hospitals and medical schools. These evils, the lecturer then proceeded to point out, would be in great part prevented, first, by making all appointments at our hospitals for a limited period—say twenty-four years—or such other term as should insure a vacancy taking place every three years; secondly, by filling up all these from the school, the teachers in which should be selected from among the most deserving and talented pupils; thirdly, by extending the functions of the out-patient department of our hospitals to that of visiting as well as prescribing for the sick; and lastly, by specializing, to a greater extent, our large hospitals, whereby their efficiency as schools of medicine would be increased, and one of the pleas for the multiplication of separate and special charities would be taken away. The objections that might be urged against these changes were then combated; and the lecturer concluded his address by pointing out to the students the fallacy of the opinion, that experience was only to be gained at large hospitals, and exhorting them to unwearied diligence in the pursuit of the studies they were now about to enter upon.

Reviews and Notices of Books.

A History of Epidemic Pestilences from the earliest ages, with Researches into their Nature, Causes, and Prophylaxis. By Edward Bascome, M.D. Octavo, pp. 250. London: Churchill.

This work embraces the history of epidemic pestilences, from a period commencing 1495 before Christ to the year 1848. The author has endeavoured by careful examination to reconcile the discrepancies of historians as regards dates, discrepancies evidently owing to the varying commencements of the year with different people or nations. He shows the influence exercised by strictly epidemic and endemic causes over the origin and spread of those diseases which have decimated thousands, and he then gives evidence of those causes, which are more or less under the influence of man's interference. The work conveys an eloquent appeal to the powers that be in favour of sanitary reform, particularly with regard to the graveyard nuisance, bad sewerage, and bad ventilation. It appears very opportunely, and will no doubt attract a considerable share of attention.

On Gout; its History, its Causes, and its Cure. By William Gairdner, M.D. Second Edition. London: Churchill. 1851.

On its first appearance we had the pleasure of noticing Dr. Gairdner's book with hearty commendations. The physiological and purely scientific matter of the work, gave it a stamp at once distinguishing it from the host of professional publications that are printed, not because their authors have aught to tell us with which we were not well acquainted before, but that they may have an accredited means of making known their names and whereabouts. The chapter on Organized Principles, in the first edition, may truly be said to have been new ground, both in physiology and pathology, and the determination of the relation subsisting between urea and uric acid, and of the influence exerted by sleep, exercise, and respiration especially on these relations, were as added facts to the sum of our knowledge. These facts have already met with general acceptance, and we observe that they have just been confirmed by the independent observations of that eminent physiological chemist, Professor Lehman of Berlin. In the interval that has elapsed between the publication of his first edition and the appearance of the second, which now lies before us, Dr. Gairdner has not lost sight of the vein of valuable physiological ore which he had already opened so successfully; he has happily followed it farther; and in two new chapters (viii. and ix.) on the Blood and Respiration, again vindicates his claim to the title of an original and independent thinker. The way in which the important matters contained in these two chapters are handled, indeed, gives new cause, as we believe, to lament the divorce that has so long been in some sort insisted upon in medicine, between science and practice. Of late years we have been putting ourselves almost wholly into the hands of the pure chemist, for everything in the shape of physiological and even of pathological inference; but they who are something more than chemists, who are familiar with life and the various phases of its phenomena in different grades of animal existence, and in the varying states of health and disease, are but too well aware of the trackless maze into which chemistry has already led both physiology and pathology. As regards medicine, indeed, the chemist has, for some time past, been erring grievously. This has arisen, mainly, from his attempting to follow the same path in reference to medicine, which he had trodden with so much success among the other arts and sciences. He has sought to discover the laws of the living organism in his laboratory, in the same way as he had wrung her secret from nature in so many instances in the realm of brute matter. But here the chemist has certainly mistaken his competency; for by no arrangement of retort and alembic, by no co-mix-

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ture of solid and liquid and gaseous, can he resolve a single question in animal physics. The qualified inquirer here is the physician in the large and proper sense of the word, and the field for study is the living animal body. With the physician, therefore, must the chemist ally himself; to the physician must the chemist come for guidance and approval before he can draw a single reliable inference in biological science. We rejoice, therefore, very much in the book before us to meet the practical physician (in whom we of course assume the anatomist, the naturalist, and the chemist to be enshrined,) in the exercise of his indefeasible right, trying physiological questions, not merely by the lights afforded by chemical science, but by those supplied by the physics of the living body in the state both of health and disease.

Passing by all that relates to the history of gout, —its phenomena, its forms, its treatment, &c.,— we propose at this time to direct our readers' attention particularly to chapters viii. and ix. of Dr. Gairdner's work.

It is well known that in the respiratory act a larger volume of oxygen disappears than can be accounted for by the amount of carbonic acid gas evolved. It is also well established that the whole of the azote of the air inspired does not reappear in the air expired. What becomes of the missing oxygen and nitrogen? Various purely chemical explanations have been suggested in reference to the oxygen especially, all of them rather fine-spun and ingenious than satisfactory, or even probable; and, with reference to the nitrogen, the chemists, finding it a less pliable element than oxygen, seem generally to have escaped the difficulty of all explanation, by taking no notice of the fact. Some such general and sweeping physiological mode of accounting for the phenomena in question, as is implied in the assumption of certain combinations effected between the missing elements and the elements of the blood, has also been repeatedly proposed; but the precise nature of these combinations has never been indicated.

Mayer, Denis, and Müller showed that arterial blood was richer in fibrin than venous blood, but they explained the difference by referring to the new supply just poured into the arterial system, with the contents of the thoracic duct. The multiplied testimony, however, of these and other authors, as to the different condition of the fibrin in arterial and in venous blood—constituting in the former thick, solid, and shining bundles, in the latter soft and more diffluent masses—convinced Dr. Gairdner that the hypothetical explanations of previous inquirers must be reviewed, and, above all, brought to the test of experiment. The familiar increase of the fibrinous element of the blood, in cases where the respiration and circulation are accelerated, as well as the phenomena of ordinary local inflammation, in which coagulable lymph or a fibrinous deposit is never absent, were sufficient of themselves to lead the practical physician to the conclusion, that it must be in the course of the increased respiration that the larger amount of fibrin was elaborated.

It now became matter of much interest and considerable thought with our author, to contrive an experiment which should make evident the truth he desired to elicit. At first he thought it probable that if albumen passed into fibrin by the aid of and during the process of respiration, the blood abstracted before and after sharp exercise would give traces of the fact. A horse was accordingly first bled from the jugular vein in the stable, and again from the same orifice whilst still reeking from the exertion of galloping smartly for an hour. At first it seemed that the anticipated result was disclosed, for the bulk of the fibrin was found very remarkably increased in the blood abstracted after the exercise; but the increase was discovered to be apparent only; the *bulk* was more, the *weight* of fibrin after drying had not augmented.

On pondering over the results of this experiment, our author saw that they could not have been other than they were found. Whatever increase of fibrin takes place on the arterial side of the heart, the blood must, in a state of health, return to its ordinary condition in the veins; otherwise the balance of the system would soon be destroyed, and fever engendered. If there were more fibrin eliminated during violent exercise, the unwonted exertion, the increased tear and wear of the muscles, the evolution of heat, &c., implied an increased expenditure of the plastic as well as of all the elements of the blood, to make good the waste. To avoid sources of error so apparent on reflection, our author now bethought him of keeping an animal at rest, but making him breathe an atmosphere of oxygen, or at least one very highly oxygenated. The blood of two rabbits, one only of which was exposed to the oxygenating influence, was accordingly examined; and whilst the fibrin in the animal which was breathing the common atmosphere was found in the proportion of 1·55 in 1000 parts, that of the creature which had been breathing oxygen for half an hour amounted to as many as 2·9 in 1000 parts.* Here then was a result in accordance with the preconceived idea. But the experiment was open to various objections, which, as they did not escape our author, we need not particularize. An attempt was made to meet the objection to the blood having been obtained from arterial veins alike, by taking the supply for examination from the arteries of a horse; but the difficulty of subjecting so large an animal to the influence of oxygen was found insuperable, and there was nothing for it but again to have recourse to the rabbit, and by taking the blood immediately from the aorta, and multiplying experiments, to get rid of the fallacy which various constitutions and varying health imposed. Six healthy male rabbits were

* In another experiment, undertaken with a view to determine a different point, in which a rabbit was kept under the influence of an electro-magnetic current between chest and spine for half an hour, the breathing was found to be accelerated in the highest degree, and the blood on examination proved to contain as many as 2·9 fibrin in 1000 parts. (*Vide* p. 185.)

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accordingly taken, and the arterial blood of these examined, with a view to establish the quantitative proportion of the different organized principles. The results obtained are exhibited in the following

Table of the relative proportion of the organic constituents in 1000 *parts of the blood of the rabbit.*

	Fibrin.	Globules.	Albumen.
1	1·8	88·	40·6
2	1·45	77·14	37·2
3	1·45	95·5	40·
4	1·5	70·	52·
5	2·	92·	50·
6	1·73	71·5	58·
Average	1·65	82·35	46·3

The changes induced in the blood by hyperoxygenation were next determined, with the result specified in the following table.

	Albumen.	Globules.	Fibrin.
1	40·	75·	2·5
2	45·7	73·2	2·4
3	35·	60·5	2·3
Average	40·23	69·56	2·4

It is impossible not to agree with the author in concluding, from the inspection of these tables, that oxygenation and fibrination are identical. All that we know of physiology, indeed, leads irresistibly to the same conclusion. Perhaps there is no better illustration of the truth than the incidents of the incubated egg, where we see a homogeneous mass of albumen, under the influence of warmth and a specially contrived oxygenating apparatus spread over the whole interior surface of the shell, gradually converted into blood and muscular flesh, and gelatinous tissues, and brain and nerves, made up in general of elements into whose ultimate constitution oxygen enters in larger proportion than in the albuminous matrix out of which they were all produced.

Having now demonstrated how fibrin is produced, Dr. Gairdner next turned his attention to *gelatin*, which he sought to trace to its source.—This substance, as he observes, is perhaps the most perplexing of all animal matters. It is not to be detected in the blood, and suddenly, without any apparent stage of transition, it makes its appearance in various tissues—the skin, cellular membrane, tendons, ligaments, cartilages, and bones. The difficulty of rendering any account of this substance has been solved, he remarks, (p. 157,) by the systematic chemists in a very easy and expeditious manner, by denying the existence of gelatin altogether as a part of the animal body, and assuring us that it is first produced in the process of ebullition; and this, all the while, without deigning to inform us of the molecular changes that are effected, of the new combinations of elements that take place, in order to the appearance of this educt of the seething-pot.

Without acquiescing in the views of the chemists, but associating himself with the great body of the medical profession, who still insist on speaking of gelatin as a real constituent of the animal body, our author, after contrasting this substance with the other grand plastic elements of the organism, insisting particularly on the state of great condensation in which it must exist in the tissues, refers to the elementary constitution of gelatin, placing it in conjunction with albumen, fibrin, and chondrin: this he has done in a table, which we subjoin.

		Carbon.	Hydrogen.	Nitrogen.	Oxygen.	Sulphur.	Phosphorus.
Albumen, by	Mulder .	54·086	7·100	15·650	22·157	0·677	0·330
Do.	" Scheerer	55·097	6·890	15·681	22·342		
Fibrin	" Mulder .	53·810	6·910	15·539	23·092	0·359	0·330
Do.	" Scheerer	54·454	7·069	15·762	22·715		
Gelatin	" Mulder .	50·050	6·450	18·250	25·120		
Do.	" Scheerer	50·557	6·903	18·790	23·750		
Chondrin	" Mulder .	49·960	6·630	14·440	28·890	0·080	
Do.	" Scheerer	49·496	7·133	14·908	28·463	..	

"An inspection of this table," says our author, "seems to me replete with interest, and pregnant with useful suggestions. The cotaneous disappearance or diminution of all the combustible matters, except hydrogen, with the increase of oxygen, is very striking. I cannot help connecting the remarkable characteristics of the tissues we have been considering with the known qualities of the elements which enter into their composition. All these ligamentous or gelatinous tissues have, and absolutely require for the uses they serve, a great degree of elasticity, durability, and ductility. Their combustible and perishable elements are removed, while they receive a great addition of the least destructible of all the productions of nature. The cartilaginous or chondrinous tissues, on the contrary, require no ductility and tenacity, but even augmented elasticity; the heavier ingredient, nitrogen, is withdrawn and the expansive hydrogen is maintained. These are not phantoms of the imagination. They appear to me indications of important truths, and to point in the direction of a sound philosophy."

With reference to the disappearance of nitrogen, we gladly let the author speak for himself, and so give our readers an opportunity of enjoying the admirable style he possesses of writing English, and the sterling sense that guides his pen. He says:—

"The experiments of Mylne Edwards on the absorption of nitrogen have fallen into unmerited neglect. Though never disproved, they have been dropped.—The disappearance in the blood of an element, so little prone to unite itself to other substances, has been an insurmountable difficulty to men of science. But it is chiefly an obstacle to those whose pursuits are too exclusively chemical. I fear I shall weary with my iteration of the necessity of looking on animals as organized beings, not surrendered to the laws of matter, in whom indeed these laws are entirely subordinate to vital actions and vital necessities. The success which has of late years attended the researches of chemistry into the physiology of organized beings, has too strong a tendency to make us forget the much greater forces which control and bind the palpable and visible phenomena. I have, indeed, been lately

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much surprised to read the expression of open incredulity, and something like derision of vital actions.—It would seem enough to observe a creature instinct with life, and the same being in death and corruption, subject to the uninfluenced operation of chemical and mechanical agents, to put an end, at once and forever, to such overweening philosophy. I have not a doubt that the atmosphere is the real source of the azote required for the constitution of gelatin, and that this is another proof of the controlling force of these vital functions, which accomplish with ease changes impossible by the unaided agency of any known scientific power. Edwards has proved the disappearance of nitrogen in respiration; Magnus has clearly shown its presence in the blood; chemical analysis yields it in the organic principles of this fluid; it seems to me that demonstration could hardly be closer and more complete.

"We are now prepared to understand the origin of gelatin, without supposing it to contradict the general law, that the great organized principles which serve for the construction and nourishment of the frame are eleminated in the blood. If the gelatin be raised from the fibrin, as I think will appear at least probable, this change must take place in the course of the circulation. But when the requisite addition of oxygen and nitrogen has been made to fibrin, the result will not be a jelly, which alone we are accustomed to consider gelatin, but which is really a hydrate of gelatin; the result will rather be, that radicle which we have seen swell into many times its original bulk, when exposed to the action of solvent fluids and heat. Not finding, however, within the current of the circulation, that great amount of moisture essential to its disintegration, it is necessarily and immediately dropped on the tissues where it is required."

There is much more of paramount interest which follows, but for the present we must conclude, promising ourselves the pleasure, nevertheless, of returning to this excellent book, and accompanying its author through his views of respiration as a process of nutrition, as well as witnessing what practical inferences may be drawn from the chemico-physiological matters with which he has been dealing.

1. *Report of the Alleged Lunatic's Friend Society.* Pamphlet. London.
2. *Summary of Suggestions for Additions to the Law of Lunacy.* Pamphlet.

THE society which has issued the report has already effected great good in the cause of the unhappy lunatic. Much, however, remains to be done, and we recommend the attentive perusal of this document to every friend of humanity. The state of the law of lunacy in this country is in many respects a disgrace to the statute book; and there are many evils connected with it, which call loudly for reformation. Some of these evils are enumerated in a petition which the society has presented to parliament, during the past session, and portions of which we extract.

The petition showeth,—"That in the year 1845 an act was passed for amending the laws relating to the arrest, confinement, and treatment of persons alleged to be of unsound mind, intituled 'an act for regulating the care and treatment of lunatics.'

"That under the said act the seizure and confinement of persons alleged to be of unsound mind, may be still effected in a clandestine manner, upon the order of a perfect stranger, and the certificates of any two medical men, without the sanction of a magistrate, or the attestation of any person of recognized authority, and by the servants of private individuals, and not by the officers of the law.

"That when any person is so confined, steps are not required to be taken by any authority immediately, to ascertain the real state of such person's mind, and the justice of the grounds of his apprehension and confinement, nor is any provision made in the act for such person being informed of the name of the party who has ordered his confinement, of the medical men that have certified him to be insane, or of the charges that are brought against him, nor for his communicating with his friends or attorney; so that a person is frequently confined three months, or more, before he has an opportunity of appealing to any authority for an examination into the grounds of his confinement.

"That the law does not require, or allow, that such person should be present, either in person, or by attorney, at any inquiry that may be made before the visiting magistrates, or commissioners in lunacy, into the grounds of his confinement, neither are any letters from patients allowed to be sent without the inspection and sanction of the superintendent of the asylum.

"That there are now upwards of 15,000 persons confined as lunatic patients in public and private asylums and hospitals, exclusive of about 3000 pauper patients in workhouses, all of whom are under the supervision of the commissioners in lunacy.

"That the experience, during a lapse of several years, of many patients who have applied to this society, proves that the system of supervision of asylums, provided by the law, through the quarterly visits of magistrates and the occasional visits of the commissioners, in the country, and through the quarterly visits of the commissioners in the metropolis, is highly defective, and not sufficient to detect injustice, to remedy abuses, and to prevent intimidation and ill-treatment, but exposes patients in asylums, who may prefer complaints to the visiting authorities, to the vindictive persecutions of the proprietors and servants they make complaint against; and that these complaints are fully corroborated in the evidence taken by the Gloucestershire magistrates, in inquiries made by them during the last three years, into the management of the private lunatic asylums in that county, and by the reports of the chairman of such magistrates, presented to the court of quarter session.

"That the chairman of the commissioners in lunacy who introduced this law into parliament, has acknowledged it to be most defective, and that the inspection of asylums under it is very imperfect and unwillingly performed.

"That it is the opinion of your petitioners, that the compulsory confinement of patients in private asylums, is contrary to sound principles of legislation; but that if such a system is allowed to exist, nothing short of weekly or fortnightly inspection of such asylums, and that by persons residing in the neighbourhood, who can make themselves acquainted with the cases and characters of the patients confined in them, can be adequate to prevent the abuses which still exist in private asylums, nor can any less frequent inspection do effectual justice to all parties concerned in the detention of persons alleged to be insane.

"That it is the opinion of your petitioners, that it is contrary to the principles of religious liberty to prevent ministers of religion having access to patients of their own persuasion, as is the case under the present system.

"That it is desirable, also, that on the death of

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any patient in an asylum, the report of such death should be sent to the coroner, who should be required to make inquiries into the cause of his death, so that an inquest might be held on the body, if any circumstances of suspicion should show the necessity of it."

The second of these pamphlets is issued by the court of quarter sessions for Gloucestershire, and contains many valuable suggestions for an alteration in the law of lunacy. The "Summary" is highly creditable to the justices of Gloucestershire, and we doubt not that many of their suggestions will be embodied in any alteration which may take place in the law.

RECORDS OF THE RESULTS OF

MICROSCOPICAL AND CHEMICAL ANALYSES

OF THE

SOLIDS AND FLUIDS

CONSUMED BY ALL CLASSES OF THE PUBLIC.

M I L K

AND ITS ADULTERATIONS.

Many infants subsist entirely on the milk of the cow; that nutritious fluid also usually forms a large portion of the diet of most young children, and, in some shape or other, enters into the daily food of almost every adult; it therefore becomes a matter of primary importance to determine whether milk, as supplied for the consumption of the public, especially the inhabitants of this great city, is in a genuine state or not; and to this task we now propose to devote ourselves.

If the testimony of ordinary observers, and even of many scientific witnesses, is to be credited, there are but few articles of food more liable to adulteration, and this of the grossest description, than milk.

Composition and Analysis of Milk.

Before proceeding to refer to the adulterations of milk, it will be proper to treat of its composition.

From the fact that persons may be entirely sustained upon a diet of milk for an indefinite period, it may be concluded that that fluid must contain all the elements necessary for the growth and sustenance of the human body, a view the correctness of which is fully established by chemical research.

Milk consists of water holding in solution casein, or cheese, sugar of milk, various salts, and in suspension, fatty matter, in the form of myriads of semi-opaque globules, to which the colour and opacity of milk is due.

Skim-milk, butter-milk, cream, butter, curds-and-whey, cream-cheese, and ordinary cheese, are mere modifications of milk, differing only from each other either in the abstraction of one or more of its constituents, or else in the variation of their proportions.

Skim-milk.

The first of these (skim-milk) differs from ordinary milk in containing a less quantity of fatty matter, a portion of this having been removed with the cream; it still, however, contains nearly all the cheese, the sugar of milk, some butter, and the salts of milk: it is therefore scarcely less nutritious than new milk, but in consequence of the diminished amount of fat, is less adapted to occasion a development of that substance, and to the maintenance of the respiration and temperature of the body. In some cases where fatty matter is found to disagree, and where, in consequence, milk in its usual state cannot be taken without inconvenience, skim-milk may be substituted with advantage.

Butter-milk.

Butter-milk approaches skim-milk in its composition, but contains a still smaller quantity of fat: as an article of diet for poor persons, it has the recommendation of cheapness.

Potatoes and butter-milk, as is well known, taken together, form a very considerable portion of the diet of the peasantry of Ireland: the butter-milk constitutes an essential part of such a diet, it supplying the nitrogenized matter necessary for the growth of the body, and of which the potatoes themselves are deficient.

Cream.

In contra-distinction to these, cream consists almost entirely of the fat, with a very small quantity of casein and the other constituents of milk.

Butter.

Butter differs little from cream, but is more completely separated from the cheese, sugar, and salts; and the fat globules, in place of being free and distinct, have all run together, so as to form a semi-solid substance.

Curds-and-whey.

Curds-and-whey are made up of all the elements of milk, but the form in which they exist is altered: the cheese is thrown down by rennet, or by the addition of an acid, as ascetic acid, and in its descent carries down the greater part of the butter, the two together forming the curd; while the whey, or serum, consists entirely of water, the sugar, and the salts.

Cream-cheese.

Cream-cheese consists of the curd, (that is, of the cheese and butter,) the greater part of the serum or whey being removed by slight pressure.

Ordinary Cheese.

Ordinary cheese contains little or no butter, and is made either from pure or skim-milk, according to the quality; the casein is precipitated by rennet in the usual manner, and subjected to great pressure in moulds, *annato* being frequently added, to heighten its colour.

The relative proportions of the different constituents of cow's milk, especially the fatty matter, are subject to very great variation: the age of the cow, the time after calving, food, temperature, weather, and the time and frequency of milking, all occasion considerable differences.

Influence of Age on Milk.

With respect to age, a young cow with her first calf gives less milk than with her second, third, or fourth calf, she being considered to be in her best condition, in most cases, from four to seven years old.

The period during which cows give milk after calving is usually five or six months, but very frequently the time is much prolonged beyond this: we have been informed of an instance of a cow continuing to give milk for three years and a half after calving.

The first milk yielded by the cow after calving is yellow, thick, and stringy; it is called colostrum, and by milkmen and others, "beastings." This state of the milk lasts about three weeks to a month, but is very bad for the first ten days, during which time the milk is not fit for use. From the end of the first to the termination of the third or fourth month, the milk is in its best condition.

The cow carries her calf for forty weeks, or ten

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lunar months: it is the common practice to milk the cow regularly for the first seven, eight, or nine months of this period—a practice which, at first sight, appears to be highly objectionable, but which is really not so much so as may be supposed; and it is rendered absolutely necessary by the fact, that cows could not be otherwise profitably kept; nevertheless, it is very important that the milking should not be continued too long, for the sake of the cow, the calf, and the milk itself: in general it should cease at the end of the seventh month; many cow-keepers, however, continue to milk up to a very short period of calving.

Another very objectionable practice is to permit the cow again to become in calf within two or three months after having calved; the object of doing so is to derive as much profit as practicable from the animal, without regard to the effect on its constitution, the quality of the milk, or the growth of the calf. It is impossible to conceive that a cow can continue to yield large quantities of good milk daily, and afford, at the same time, sufficient nourishment for carrying on effectively the process of gestation.

Influence of Food on Milk.

The natural food of the cow is evidently that derived from pastures, viz. grass, the milk obtained from cows fed upon this being of excellent quality and sufficiently rich for all purposes.

The next most natural food is dried grass or hay, which is given largely to cows in winter, the milk being nearly the same in quality as from grass.

Beet-root and carrots being very nutritious, are also usually given to cows in the winter time with advantage. With regard to the effect of beet-root and carrots on milk, we obtain the following information by MM. O. Henrie and Chevalier, as reported in Mr. Mitchell's treatise on the "Falsification of Food,"—p. 74.

The constituents of cow's milk in a normal state, according to MM. O. Henrie and Chevalier, are as follows:—

Casein (cheesy matter)	4·48
Butter	3·13
Sugar of Milk	4·77
Salts, various	0·60
Water	87·02
	100·00

When the cows are fed on beet:—

Casein	3·75
Butter	2·75
Sugar of Milk	5·95
Salts	0·68
Water	86·87
	100·00

When the cows are fed on carrots:—

Casein	4·20
Butter	3·08
Sugar of Milk	5·30
Salts	0·75
Water	86·67
	100·00

It will be observed that, according to the above tables, the effect of feeding cows on carrots is to occasion a slight diminution in the amount of casein and butter, but an increase in the quantity of sugar; while feeding them on beet-root reduces still more the quantity of casein and butter, but very largely increases the sugar—effects which, from the richness of carrot and beet in sugar, might have been anticipated.

As is well known, a very considerable number of the cows which supply London with milk, are kept in various confined and unhealthy places in the metropolis: such cows are seldom turned out to grass; the system of feeding adopted being altogether artificial and unnatural. Grains and distillers' wash form the chief part of their food; these stimulate the animals unnaturally, and under the stimulus large quantities of milk of inferior quality are secreted, the cow quickly becoming worn out and diseased in consequence.

In reference to the effects of grains on cows, Mr. Harley makes the following remarks:—

"Brewers' and distillers' grains and distillers' wash make the cattle grain-sick, as it is termed, and prove injurious to the stomach of the animal. It has been ascertained that if cows are fed upon these grains, &c., their constitutions become quickly destroyed."*

The *Veterinary Record* for April, 1850, publishes the annexed extract from a New York paper, which shows the effect of distillers' wash on cows:—"There exists on Long Island, near Brooklyn, several manufactories of milk, the process of conducting which should be known; one of these dairies covers a space of 600 feet front, by 300 feet deep, carefully fenced in so as to be as private as possible, the business of the people being to drink the milk, not to know how it is made, in which enclosure over 400 cows are kept the whole year round. These cows are fed on the refuse slop of whisky-distillers, and it is given to them warm. Such is the fondness of cows for this vile compound, that after having fed upon it for a week or more, their appetites become so depraved that they will take no other food. The result is, their milk-producing organs are stimulated to a wonderful degree; they yield enormously, but soon become diseased; their gums ulcerate, their teeth drop out, and their breath becomes fœtid. Though thus diseased, they do not fall away in flesh; but on the contrary, puff up and bloat to great apparent fatness; their joints become stiff, so that they cannot with ease lie down, and rarely, or never, come out alive. Bad as this is, their milk is afterwards mixed with molasses, water, and whiting, and these sold to the public of New York for pure milk! It is of course very injurious to children, who use it in much greater quantities than adults."

MM. Boussingault and Lebel, from experiments made, have arrived at the conclusion that the kind of food has not a great influence either upon the amount or composition of milk, provided quantities containing equal proportions of nutritious matter be given.

Influence of Temperature on Milk.

In hot countries and dry seasons the quantity of milk yielded is said to be less, but the quality is richer; it is also stated that cold favours the production of sugar and cheese, whilst hot weather augments the amount of butter.

It would be extremely desirable to ascertain precisely the extent to which the quality of milk is influenced by weather.

Influence of the Time and Frequency of Milking.

With regard to the quality of milk as affected by the time and frequency of milking, morning milk is said to be better than that obtained in the afternoon, and the milk of cows when milked but once a day only, is richer than either. It is the common belief that the last portion of the milk obtained at any milking is richer than the first; we have taken pains to ascertain whether there is any foundation for such an opinion, and find it to be really the case to a remarkable extent, as will appear from the following table:—

* Harleian Dairy System, pp. 73 and 74.

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TABLE SHOWING THE DIFFERENCE IN THE QUALITY OF THE FIRST AND LAST MILK OBTAINED AT EACH MILKING.

1st Milk.

Afternoon.

Cows.	Milk Spec Grav.	Cream.
1	1027	9°
2	1026	13
3	1027	8
4	1029	7
5	1030	11
6	1030	8
7	1029	3½
8	1031	2
		61½

2nd Milk.

1	1023	25
2	1023	22
3	1025	10
4	1024	15
5	1024	32
6	1022	25
7	1026	7½
8	1030	5
		141½

From an examination of these tables it appears that the second milks are of much lower specific gravity than the first; and hence, had the specific-gravity test alone being relied on, they would have been pronounced to be inferior in richness to the first; a conclusion the reverse of that which is correct. Thus, while the cream of the whole eight samples of the first milks amounted to 61½ per-centages, that of the last amounted to 141½; that is, they contained more than double the quantity of cream. This fact is not without practical importance.

It is a common practice for invalids and others to obtain their glass of milk direct from the cow; we thus perceive that in this way they seldom obtain the proper proportion of butter, a circumstance which may be of advantage in some cases, and of disadvantage in others. In London it is now common for cows to be driven through the streets, and to be milked in the presence of the purchaser; although in this way the buyer succeeds in procuring it genuine, he does not always obtain the milk most suitable for drinking with his tea.

The great difference in the amount of cream contained in the first and last milk taken from the cow at one milking, appears to be satisfactorily explained on the supposition, that the fatty matter of the milk obeys the same law in the udder of the cow that it does when set aside in a vessel.

It is thus evident that even genuine milk varies exceedingly under different circumstances in the proportion of its several constituents.

On the Housing of Cows.

In a very useful little pamphlet, published some time since by Mr. H. Rugg, surgeon, on London Milk,* we meet with many particulars relating to the improper mode pursued in feeding and housing cows kept in various parts of the metropolis.

"Any place, any hovel," writes Mr. Rugg, "cow-keepers seem to consider will do for a cow—narrow lanes, confined corners, &c.,—and yet they wonder how it is that they lose so many from disease. Can any one with a grain of common sense at all wonder that cows should be afflicted with disease when they are huddled together in a space that does not allow them sufficient breathing-room, with their heads placed close up to the wall, and without a sufficient current of air or ventilation; the carbonic acid expired from their lungs is, before it can rise, the greater part inhaled again, unmixed with a sufficiency of pure air, so necessary for the oxidation of the blood, and consequent vitality of the body.

"The air of the cow-houses is not alone vitiated by the exhalations of the lungs of the cows, but from the improper drainage of their sheds, and from the collections of all kinds of offal and filth and vegetable substances in a state of decomposition, together with pigs running about the place, or enclosed in one corner of the shed.

"It is really astonishing that cow-keepers do not see that the cause of their losing so many cows by disease is from those close, filthy, unventilated, damp, badly-drained, and ill-constructed sheds. They have it, in some measure, in their power, one would imagine, to remedy this deadly evil; but it appears they have very little regard either for the cleanliness of those sheds or their cows, though cleanliness should be the life and soul of a dairy in all its departments."

The late Mr. Harley, of Glasgow, who kept 300 cows, states that "in close, ill-ventilated cow-houses, the cattle will often be found in a profuse perspiration, which is brought on solely by their inhaling a vitiated atmosphere, deficient in vital air, (oxygen gas.) This necessarily exhausts their vigour, and makes them liable to be injured from cold; and when they are milked in these dirty hovels, the milk is always impregnated with foul air; thus the necessity of proper ventilation, and no stagnant water should be allowed to remain on the premises."*

"Milk," says Mr. Aiton, "which is one of our most nutritive species of food, is too apt to become neglected, and many have rejected it from a belief that it was seldom obtained free from impurities. The atmosphere of a cow-house not duly ventilated, and especially in the stenching lanes of a large town, the nastiness of the cows, want of cleanliness in those who feed and milk them, and the nature of the milk itself, so apt to become impregnated with foul air and every impurity, have often driven people who have a due sense of cleanliness, as well as those of delicate constitutions, who most needed that excellent restorative, from the use of it with disgust."†

Dr. Thompson, in his calculations on the amount of carbon consumed by a cow in her food, states, that if his views be correct, upwards of 6 lbs. of carbon are expended by a cow daily, in the production of animal heat; and as one pound of carbon, when combined with the necessary amount of oxygen to form carbonic acid, gives out as much heat as would melt 104–2 lbs. of ice, it is evident that the quantity of ice capable of being melted by the heat generated by one cow in a day, would amount to upwards of 625 lbs., or it would heat one of water 87,528°. It would consume at the same time, the enormous quantity of 330,429 cubic inches of oxygen gas, or 191¼ cubic feet; and as this amounts to one-fifth of the atmospheric air, we find that one cow, consuming 6 lbs. of carbon for respiratory purposes, would require 956¼ cubic feet of atmospheric air."‡

We will conclude our remarks on the housing of cows by the following description of the actual condition of cow-sheds, taken from a pamphlet by the

* Observations on London Milk, second edition. 1s. Bailey and Moon, Regent-street.

* Harleian Dairy System, p. 14.
† Aiton's Dairy Husbandry, p. 70.
‡ Thompson's Experimental Researches on the Food of Animals, p. 114.

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Hon. F. Byng, on the Sanitary Condition of the Parish of St. James's, Westminster :—

"Two or these sheds (of which there are fourteen in the parish) are situated at the angle of Hopkins and New Streets, Golden-Square, and range one above the other, within a yard of the back of the houses in New-street. Forty cows are kept in them, two in each seven feet of space. There is no ventilation, save by the unceiled tile roof, through which the ammoniacal vapours escape into the houses, to the destruction of the health of the inmates. Besides the animals, there is at one end a large tank for grains, a store-place for turnips and hay, and between them a receptacle into which the liquid manure drains and the solid is heaped. At the other end is a capacious vault, with a brick partition, one division of which contains mangel-wurzel, turnips, and potatoes, and the other a dirty, yellow, sour-smelling liquid, called brewers'-wash, a portion of which is mixed with the food of the cows. The neighbours are subject also to the annoyance of manure-carts, which frequently stand some time in front of their houses; and when the mouth of the vault is opened, to admit the ingress of the brewers'-wash, a 'burning sour smell' is described by them as pervading their dwellings. After the buildings have remained closed for the night, the atmosphere within becomes heated, foul and unwholesome." In summer time the smell is most offensive. Decomposition of the vegetable matters in the vault is also stated to be frequent, and the stench thence arising insufferable.

"At the opposite side of the houses in the same street is another shed, with even less possibility of ventilation than in those just described. Thirty-two cows stand side by side, two in each space of seven feet, as above. In Marshall-street there is a third establishment, containing twenty-eight cows. In a wall on one side overlooking a yard in which is a slaughter-house, are several grated openings, but they are carefully covered with pieces of sacking, as if to prevent all possible admission of air. In this shed are receptacles for vegetables and grains as before; the manure-tank holds twelve tons, and that for brewers' wash, 600 gallons.

"It is to be remarked that even the manure, from the nature of the food supplied to the cows, acquires a peculiarly unhealthy and offensive odour, altogether dissimilar to that from farm-fed animals. In this atmosphere, reeking with all these pestiferous effluvia, the poor creatures are kept close shut up, night and day, till their milk failing they are consigned to the butcher.

"The effects of this system of feeding, impure air, and deprivation of all exercise, are thus described from actual inspection of four cows, which the keeper said were suffering from the old disease:—There was inflammation of the mucous membrane of the month, fauces, and gullet, a catarrhal discharge from the nostrils, and such prostration of the muscular system, as to render the animals unable to remain in a standing position for any length of time. The mucous membrane of the mouth is sometimes so blistered as to prevent the animals from taking food.

"Swellings of the udder appeared, attended by a change in the quality and deficiency in the secretion of the milk. The feet also became much diseased and swollen; general emaciation followed, in which the animals continued for an indefinite period, or till death. Four months prior to this visit, the owner of one of the sheds lost thirteen cows by disease.

"A Dutch cow was pointed out to me, which was evidently in a state of marasmus, her head hanging nearly to the ground, the horns cold, the ribs staring through the hide on each side of her emaciated body, on which the hair bristled and stood erect. Notwithstanding this prostration of the vital powers, this cow was regularly milked with the others, furnishing a daily supply of two quarts.

"On inquiry it did not appear that veterinary aid was ever sought; the only means used was to keep the poor animals as warm as possible."

Another matter for consideration is the neglected condition of the skin of cows.

"Cowkeepers," remarks Mr. Rugg, "never have the skins of their beasts regularly and properly groomed, which is equally necessary with respect to their health, and consequent good quality of their milk, as being well housed in properly constructed sheds. The cows would be more healthy, would yield more milk, and that of a very much better quality.

"It is impossible for cows to be healthy unless the insensible perspiration, as given off through the pores of the skin, goes on regularly and uninterruptedly, and this cannot be the case when they are kept in dirty cow-houses, and no care taken to remove the dirt by which these pores are obstructed. Cows, from not having that attention paid to the health of their skins, are frequently subject to diseases thereof, such as the mange, itch, &c. There is scarcely a cow-shed that one enters but some of the beasts will be found afflicted with the mange. I entered one shed under the Adelphi Arches, where forty cows were kept, and every one of them had that disease; also another shed in the same locality where the poor beasts never saw the light of heaven from year's end to year's end, the place being entirely lighted by gas, and the only ventilation that existed was by means of a small hole, not half a foot square, knocked out of the wall that forms part of the lane leading to the halfpenny steamboats."

Adulteration of Milk.

Before proceeding to make known the results of our own observations bearing on the adulteration of milk, in accordance with our usual practice, we now give the investigations and remarks of other writers on this subject.

Adulteration with Water.

In reference to this adulteration, Mr. Mitchell makes the following observations:—

"This is the substance that is employed most generally in the adulteration of milk. This fraud is difficult of detection, more especially when the quantity employed is very small.

"The following comparative experiments have been made:*—

The general density of pure milk is about ...	1·038
A mixture of 75 parts milk and 25 of water, has a density	1·021
A mixture of 66 parts milk and 33 of water, has a density	1·020

"The density of pure milk being variable, it may be readily seen that it is impossible to arrive exactly at the truth, by the density of milk examined, as to the quantity of extra-contained water.

"The truth can only be comparatively arrived at, by ascertaining the *minimum* density of pure milk, and seeing whether the density of the examined sample be above or below that.

"Not only is water added to the milk, but cream, at the same time, abstracted. These two operations cause in the appearance of the milk a very considerable difference, for merely by the abstraction of the cream the residual milk takes a flimsy look, so to speak, together with a bluish tinge. These appearances

* "Dictionnaire des Réactifs Chemiques." Par M. J. S. Lassaigne. Article Milk.

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increase when water has been added, and, in order to mask the two previous impositions, a third, fourth, or even fifth must be practised.

"In order to ascertain whether a partially-skimmed milk has been supplied, we must either ascertain the amount of butter, by one of the processes already pointed out, or have recourse to an instrument termed a *lactometer*."

In reference to the same adulteration, Dr. Normandy's work contains the subjoined remarks:—

"The most frequent, and, one might say, the unexceptionable adulteration of the milk sold in towns, consists in an addition of water. Pure milk having a mean density of about 1·031, or 1·030, the addition of water may, to a certain extent, be detected by means of the specific gravity bottle, or hydrometer. According to M. Lassaigne, the specific gravity of cow's milk, at 50° Fahr., is 1·031; and it would appear that an addition of one-quarter or one-third of the volume of such milk is necessary to lower its gravity to the extent of 0·017 or 0·018. The results of M. Lassaigne's experiments are as follows:—

Pure milk at 50° Fahr.	...	...	...	...	1·031
73 parts of milk with 25 parts of water...				...	1·021
66 " 33 "			...	...	1·020

"The specific gravity, therefore, proves only that the density of milk should never be below 1·031, or 1·030; but can give no indication respecting the quantity added up to one quarter.

Adulteration with Flour or Starch.

"The simplest indication of the existence of flour or starch in milk is that of small diaphanous clots, which may be seen on the sides of the vessel containing it, if it be transparent. Milk containing starch burns more readily on the bottom of the vessel in which it is boiled than pure milk. This, however, is an equivocal test.

"The best test is to add to a portion of the whey of the suspected milk a small quantity of tincture of iodine; if starch be present, a blue colour will become apparent."*—*Mitchell.*

"The milk should first be coagulated, by boiling with it a little acetic acid, and it is then filtered. The filtered serum is allowed to cool, and when quite cold, it is tested with a few drops of a solution of iodine. If this produces a blue colour, it is a sign that *starch, flour*, or a *decoction of bran*, of *barley*, or *rice*, or some other *amylaceous* substance has been added."—*Normandy.*

Adulteration with Milk of Almonds.

"This is very little used, on account of its expense; but when it is employed, it may be thus detected. To about a quarter of an ounce of the milk, add a few grains of amygdaline, and stir well. If it contains milk of almonds, the odour of *bitter* almonds will be developed in a few minutes; if the milk be pure, no peculiar smell will be produced."—*Mitchell.*

Adulteration with Gum.

"This is seldom employed, like the last-named substance, on account of its expense. The following is the method of discovering it:—Coagulate the milk by ebullition with a little acetic acid; filter off the whey, and pour into it a small quantity of alcohol; a dull, opaque, and abundant white precipitate will fall, which, if collected, may be proved to be gum by its properties.

"If the same course of treatment be pursued with pure milk, a very light, bluish-white precipitate falls, somewhat diaphanous, and in a very small quantity."—*Mitchell.*

"When *gum-arabic* or *dextrine* has been mixed with milk, its presence may be detected by pouring alcohol in the serum or liquor filtered from the coagulum produced by acetic acid, because a white, opaque precipitate is then formed, very different from the light, bluish, and diaphanous flakes which alcohol produces in pure milk, which are besides much less abundant. The precipitate produce may be separated by filtering, and identified as gum or dextrine by drying.

"The addition of gum-arabic to milk seems hardly probable, at least practically, since it scarcely affects the density of the milk. According to M. Quevenne, an addition of not less than 1582 grains per quart of water is required to bring it to a density of 1·030, which is about the density of milk. The fraud would therefore be unprofitable, and consequently is not very likely to take place."—*Normandy.*

Adulteration with Gum Tragacanth

"Is sometimes employed in the state of mucilage to augment the volume of the cream in ordinary milk, or to stimulate its presence on skim-milk. Gum tragacanth may be detected by boiling the milk, and leaving it at rest for some hours; a gelatinous, translucid deposit is then formed, which, being washed with a small quantity of water, and tested by a solution of iodine, produces a blue colour, because gum tragacanth contains starch.

Adulteration with Chalk.

"The common notion of milk being adulterated with chalk, or *whiting*, is unfounded. Such an adulteration is not practicable without being immediately detected; because the smallest quantity of *whiting*, or chalk, speedily separates, and falls to the bottom. I have been frequently called upon to examine samples of milk supposed to be sophisticated with whiting, but a chemical examination of the milk always proved the contrary. That a liberal quantity of water is often added to the London milk, admits of no doubt."—*Accum.*

The presence of this body may be determined by evaporating and igniting a portion of the milk, treating the residue with a small quantity of hydrochloric acid, and filtering. If, on the addition of a few drops of oxalate-of-ammonia solution, a tolerably abundant precipitate is found, chalk has existed in the milk. A very slight precipitate always takes place under these circumstances with milk.

Adulteration with Turmeric.

"*Turmeric* may be detected by evaporating a portion of the milk to about one-eighth its bulk, and then adding caustic potash in small quantity. If the yellow colour of the milk be rendered brownish, turmeric has been added. A solution of this substance is added for the purpose of producing in milk a richness of colour, serving to prevent dilution with water and abstraction of cream being apparent."—*Mitchell.*

On the Addition of Carbonate of Soda to Milk.

"In order to prevent milk from turning sour, or from coagulating, a little carbonate of soda may be, and is sometimes, added; milk may thus be kept for eight or ten days. This addition is harmless, provided the quantity added be not too great. According to D'Areet, $\frac{1}{1000}$ part of bicarbonate of soda is sufficient for the purpose. The carbonate of soda in milk may always be detected by adding to the milk its own weight of strong alcohol, by which the caseum is separated; both the caseum in the filter, and the liquor filtered therefrom, being tested with reddened

* Des Falsifications des Substances Alimentaires, par Garnier et Harell, pp. 278.

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litmus paper or turmeric paper, an alkaline reaction will be observed, if carbonate of soda is present, that is to say, the reddened litmus paper will be rendered blue and the tumeric paper brown. Moreover, if the filtrate be evaporated to dryness, and an acid poured on the residuum, a perceptible effervescence will be observed, which is due to a disengagement of carbonic acid gas, from the decomposition of the carbonate of soda by the acid employed. Pure milk treated in the same manner yields a caseum and serum, which is neutral to test-papers, or which has a slightly acid reaction, and the dry residue of the evaporated serum never effervesces when treated by an acid."—*Normandy.*

Adulteration with Sugar.

"According to MM. Raspail and Baruel, two per cent. of sugar added to milk are sufficient to impart a decided sugary flavour to it, and even one per cent. is sufficient to impart an unusual degree of sweetness. Sugar, therefore, can hardly be employed to augment the density of milk. However this may be, its presence is easily detected by coagulating the milk, filtering, and mixing a little yeast with the filtrate. If the whole be then exposed to a temperature of between 70° and 80° Fahr., an abundant and rapid disengagement of gas will take place in the course of two or three hours. Fermentation in that case is a sure sign of the presence of sugar, for pure milk cannot ferment, at least in so short a time, and the fermentation is never brisk. But the smallest proportion of sugar (either grape or cane-sugar) very speedily gives rise to a tumultuous fermentation."—*Normandy.*

Adulteration with Emulsion of Hemp-seed.

"The experiments of M. Quevenue seem to prove that the emulsion of hemp-seed, and of almonds, cannot be employed for adulterating milk, as is generally supposed, for hemp-seed communicates to the milk a very unpleasant flavour, and almonds very speedily coagulate it."—*Normandy.*

Adulteration with Cerebral Matter.

"As to the adulteration of milk by the addition of the cerebral matter of various animals, accounts of which were published by newspapers some time ago, it would appear, from the experiments which were performed at that time by the 'Conseil de Salubrite,' that no such admixture could be detected in any of the considerable number of samples of milk which were then submitted to examination; the results of the investigations made by the eminent chemists of the Conseil, have proved that were this disgustingly horrible fraud ever practised, it would be immediately detected by the microscope."—*Normandy.*

On the Effect of Storing Milk in Zinc Pans.

"Milk is sometimes kept in zinc pans for the purpose of augmenting the yield of cream. It should be known that lactic acid, which is formed in that case, and which exists in the free state even in new milk, might decompose a little of the carbonate, or saturate a little of the oxide of that metal, and render the milk unwholesome and possibly poisonous. The presence of zinc is detected by coagulating the milk with nitric acid, filtering, super-saturating with ammonia, and filtering again if necessary; if, on pouring hydro-sulphuret of ammonia in the clear filtrate, a white precipitate is formed, it is sulphuret of zinc."—*Normandy.*

Foreign Department.

Extirpation of a Voluminous Bronchocele by M. Roux.

M. Roux presented, some time ago, a patient of his to the Academy of Medicine, from whom he had successfully removed a large bronchocele. The man's age is about thirty-five, and the tumour, at first very small, had been increasing, during the last fifteen years, to the size of two fists, and lay principally on the left side of the neck. The swelling was somewhat hard, almost immovable; and seemed firmly attached to the larynx. The patient was extremely anxious for its removal, and M. Roux, after some hesitation, consented to operate. The incision was made in a longitudinal direction, and ran from the os hyoides to the sternum; M. Roux found it easy to enucleate the growth, with the precaution, however, of tying the thyroid arteries and some venous trunks as they came into view. When the tumour was almost completely detached, the pedicle, by which it was still connected with the neck, was tied, and then divided in front of the ligature.

The only phenomenon worthy of attention, which was noticed during the operation, was a fit of dyspnœa, after which the patient experienced an almost complete aphony; this lasted some time after the operation, and even now there is much hoarseness left. M. Roux accounts for this circumstance by attributing it to the division of the anterior laryngeal nerve. The patient was operated on two months ago, and the wound is now perfectly cicatrized. The tumour weighed about nine ounces and a half; it measured nine inches in circumference, and about seven in its transverse diameter. M. Velpeau was afraid that M. Roux's example would be too readily followed by other surgeons under less favourable circumstances, and thought the operation very dangerous. At the meeting, of the 24th of September, M. Velpeau himself brought forward another case of extirpation of a bronchocele, which was performed by M. Cabaret, of St. Malo; this was successful, as well as a third, undertaken by M. Hutin. Some discussion arose as to the propriety of giving the name of goitre to tumours arising *on* the thyroid body, as well as to enlargement of that gland itself. M. Sedillot contended that that appellation ought to be confined to enlargements of the thyroid gland; Messrs. Velpeau and Roux opposed that opinion.

Absence of the Uterus and Vagina.

M. Depaul has brought before the "Societé Medicale d'Emulation" of Paris, the case of a woman, twenty-two years of age, who is described as follows: The mammæ are well developed, all the appearances of the female sex are present, and the external parts of generation in the normal condition; but the vaginal orifice is replaced by a mere depression. The patient has never menstruated, but at the time when the function usually commences she experienced pain and weight in the abdomen, and a pricking sensation in the breasts. The same feelings are repeated every month, and she has all the symptoms of menstruation except the sanguineous flow. Sexual desires exist, and the impossibility of satisfying them is a source of grief to the patient.

M. Depaul introduced a catheter into the bladder, and his index finger into the anus, and did not succeed in meeting with any organ which might be supposed to be the uterus. Towards the inlet of the pelvis, and close to the sacro-iliac synchondrosis, he found a little, round, and resisting body, which he considers as the right ovary. M. Depaul looks upon the case as an example of a person without vagina or uterus, but pos-

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sessing ovaries, and therefore belonging without doubt to the female sex.

Treatment of Scabies.

M. Bazin, physician to the Hôpital St. Louis, of Paris, published in July, 1850, several cases of itch cured in a few days by frictions with the sulphur ointment all over the body. The same physician confirms, in *L'Union Médicale* of November 9, 1850, the efficacy of the treatment, by stating,—"The patients who formerly left the hospital after twelve or fifteen days only, and very often came back with a relapse of the disease, are now cured in two or three." But this is not all. for M. Bazin. finding out that some patients have an insurmountable dislike to sulphur, was induced to try several ointments prepared with essential oils—as those of lavender, thyme, rosemary, &c., and likewise turpentine and mercurial ointment. None of these were effectual. He then had the idea of trying unmedicated axunge and oil, and found it answer remarkably well, six frictions during three days being sufficient.

It will be recollected that Mr. Taylor, surgeon to the Clerkenwell Infirmary, published a book some months since, wherein he advocates frictions of a like character for the cure of typhus fever, scarlatina, &c. It would be highly useful if frictions, with simple unctuous substances, were more extensively tried in the diseases spoken of by Mr. Taylor and M. Bazin. The ease with which the remedy is obtained, and the little risk which is incurred by its use, would render it inestimable if found efficacious, especially as regards the treatment of the poor. M. Bazin has likewise tried a chamomile ointment, which cures the itch in three frictions. It is composed as follows:—Powder of fresh chamomile, white oil, axunge, of each sixteen ounces. M. Bazin proposes, therefore, in ordinary cases, that the sulphur ointment be used, (sublimed sulphur, very fine powder, of each two drachms; one yolk of egg; olive oil, one ounce, and two drachms and a half,) in exceptionable cases, either three frictions with the chamomile ointment, or six with the simple oil and axunge.

Analysis of Various Kinds of Water in France.

A committee, appointed by the Academy of Medicine and the Agricultural Society, has now almost completed a Herculean work, which Professor Dumas presented in part a short time ago to the Academy of Sciences. It is no less than the analysis and accurate description, with observations, of all the waters of France—rivers, springs wells, &c., likely to be used; all the mineral waters, as well as the salt water along the coasts. The first part, which is now printed, contains more than 400 analyses, with a short sketch of the locality and observations. The two other parts are completed and going through the press. Such undertakings are worthy of all praise; the work will form a valuable book of reference, and we can only wish that we possessed something of the kind in this country. We may, however, with some degree of satisfaction, point to our labours carried on single-handed, regarding the Thames water. (Vide The Lancet, vol. i., 1851.

Similia Similibus in Surgery.

An Italian practitioner, Dr. Francesco Rizzoli, sent some time since to the Surgical Society of Paris, a paper on a *peculiar* plan of his for rectifying accidental lameness. It would appear that Dr. Rizzoli was called to attend a man who had broken his thigh, and hearing that some time previously this patient had met with a similar accident on the other thigh bone, which had suffered great shortening, the surgeon allowed the fragments of the bone, broken in the second place, to unite whilst riding upon one another; and both limbs being thus shortened to the same extent, he remedied the lameness.

A girl was subsequently brought to this surgeon whose femur, after fracture, had likewise experienced shortening, and he coolly advised the breaking of the sound thigh-bone, to bring them both to the same length. This the parents refused, but the girl was so anxious to get rid of her lameness that she consented. Dr. Rizzoli broke the thigh by the agency of a screw attached to a rod, secured on two iron rings, one placed on the upper, the other on the lower part of the femur; the screw was connected with a strong semicircle, which pressed on the centre of the bone, and which, being tightened, fractured it. An apparatus was applied without reduction. the fragments united by producing shortening, and the girl walked straight. The Society were unanimous in condemning the e proceedings.

Varicocele treated by Cauterization.

M. de Roubaix, Surgeon to the Hôpital St. Jean at Brussels, places much reliance on cauterization in various affections, and has lately successfully applied it to varicocele. The patient is a man of thirty-three years, who had suffered from dilated veins about the scrotum for the last thirteen years. M. de Roubaix seized, with peculiar forceps made for the purpose, the varicose veins, keeping the artery and vas deferens away from his grasp. Vienna paste was then applied, and this cauterizing compound was found on the next day to have destroyed the skin of the scrotum, along with the veins. The pain had been severe, but a month afterwards the wound was cicatrized, and the patient left the hospital in very good condition. He presented himself twice during the following two months, and was quite freed from the varicocele, which had formerly given him so much uneasiness. The ligature has yielded such good results in this country, that we doubt whether the potential cautery will be much tried.

Iodine Injections into the Knee-joint.

It would appear that iodine injections, both into the larger joints and the peritonæum, are getting into favour among French surgeons. Successful cases are here and there published, but we have a right to suppose that many cases, where very unpleasant symptoms follow such injections, pass unnoticed. However this may be, it is plain that this peculiar mode of cure is hardly ever used in this country; whether rightly or not we do not pretend to say, though it might, perhaps, not be amiss to give the method a trial. M. Martininq, for instance, publishes, in *L'Union Médicale*, the case of a lady, thirty-eight years of age, who was much troubled with hydrarthrosis of the left knee. The fluid was several times dispelled by various topical applications, but it ever returned, and at last caused the knee and the lower third of the thigh to swell enormously.

After a great many remedies had been used in vain, M. Martininq proposed the evacuation of the fluid, and the injection of tincture of iodine. About two-thirds of a tumbler of a dull reddish liquid was pumped out, and five ounces of the tincture with iodide of potassium were injected. This fluid was left in the joint for a few minutes, and then taken out. The surgeon, seeing the small amount of aqueous matter which was evacuated from the joint, considered that the great swelling must have been owing, besides the watery accumulation, to the thickening of the peri-

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articular tissues. The operation caused excessive pain, which lasted several days, but finally, about three months after the injection, progression was very comfortable, the health good, and the knee had returned to the normal shape and size.

Miscellaneous Correspondence.

"Audi alteram partem."

ON AMPUTATION AT THE ANKLE-JOINT.

To the Editor of THE LANCET.

SIR,—Every one who loves the profession of surgery must take a delight in reading the well-selected and well-drawn-up cases which appear weekly in that part of your journal called "A Mirror of the Practice of Medicine and Surgery in the Hospitals of London," and I beg leave to bestow my mite of praise on the able author of them; still, whatever talent he may display, it is the lot of humanity to err, and therefore we must not be surprised if he, like the "good Homer," should sometimes nod. I am led to these remarks by a question which he propounds to the following effect: "Will a patient (and especially one belonging to the labouring class) be able to walk better and more comfortably upon the stump made by Mr. Syme's operation, than he would if the leg had been taken off three or four inches above the ankle? According to all the facts which have hitherto been recorded, as well as those of which we are going to give some detail, it would appear that the amputation at the ankle-joint yields favourable results, and that the question may be answered in the affirmative."

On this question, and especially on the affirmation of the operation yielding favourable results, I would fain join issue with the holder of the "Mirror," feeling sure he will not deem this an attack either upon himself or upon anybody else, but solely an attempt to follow his own footsteps in the elicitation of truth, and the establishment of sound principles of surgery.

Let us then proceed to a brief examination of the four cases of amputation at the ankle-joint, as narrated in THE LANCET at the place above-quoted.

In Case 1, we have the operation performed some time in the month of February, 1850; not truly at the ankle-joint, for about a quarter of an inch of both the tibia and fibula is also taken away; consequently the articulating surface, and *pro tanto*, one source of irritation, is removed. Still, what are the results? Why, we have first erysipelas; that is to say, a manifestation that either the patient or the part lacks that amount of vitality which should be capable of setting up or of sustaining a healthy inflammatory action; for erysipelas consists in nothing more than a feeble attempt at inflammation, to which either the system or the part has not the power to set a boundary.—After this ensues a sloughing of the centre of the posterior flap, a circumstance which might have been expected; the whole of the part is far removed from the centre of the circulation; the lower extremity is always the least vitally endowed, and the coldest of any part of the body; and the centre of the flap being the longest part, is the farthest part from even such languid circulation as is found in this part; a part composed of feebly endowed skin, of bone, and of tendon, the latter of which tissues notoriously possesses so little vital action that, in all cases of its being wounded, it is sure to slough. All this necessitates a second operation for the removal of another inch and a half of bone, which brings it pretty nearly into the category of operations over which the first is to stand in preference. Meanwhile, there is an abscess in the groin which refuses to heal. Why is this? Simply because there is little or no abatement in the irritation which originally caused this very abscess. Here, then, is a patient detained four months in an hospital, meeting with pretty well all the mishaps which can ensue upon an operation, and finally dying within a twelvemonth, of phthisis. Should this operation have been performed? I think not; for if he showed signs of phthisis, there was already defective vitality enough, without operating in a less perfectly organized situation; if he merely possessed the tubercular cachexia, all this irritation was sufficient to determine the access of phthisis. I think he would have had a better chance of life, and a more useful limb, had he been the subject of an amputation three or four inches below the knee.

Case 2.—Here is a case in which Chopart's operation has been performed, to all appearance unsuccessfully, for in less than four months afterwards this amputation at the ankle-joint takes place. Chopart's operation, though objectionable on account of the deal of tendinous structure involved, is not so much so as that at the ankle-joint or in its vicinity, because there is much muscular substance to form the flap, and there is plenty of vascular supply for the reparative and healing processes; while at the ankle we have little more, comparatively speaking, than the main vessels which carry the blood to the foot. This second operation is followed by a good deal of constitutional disturbance, (does this mean a threatening of erysipelas?) and about half the posterior flap sloughs.—However, the patient is discharged after being about three months in the hospital; but in less than two months after this he is re-admitted, for the wound has in reality never healed, though it is now four months and a half since the operation took place; besides, the anterior edge of the lower end of the tibia is so badly covered, that it threatens to protrude on the slightest pressure, and he had not put the stump to the ground since leaving the hospital. We have, therefore, a third operation, to take away further portions of the bone, and so to remove the articulating surface, and in about two months more he is discharged with a stump very languid, of a bluish-purple colour, (showing deficient circulation,) tender and susceptible to the changes of the weather. So that this patient was six months in the hospital, and turned out with a troublesome stump; while, with the operation suggested for the last case, he might have been relieved from suffering, with about six weeks' residence in the hospital, at most.

In Case 3, we find a more favourable subject. She is only eleven years of age; she is consequently growing. Growth, nutrition, and reparation, are only different names for what is essentially the same process; so that here we did not require an action of reparation to be set up after the operation, for it had already begun, and was going on before she came into the surgeon's hands. But even in such a subject the *comparative* vitality of different parts exists just as well as in the adult, so that we find suppuration in the sheaths of the tendons, which we may readily suppose to depend upon sloughing of these tendons; and besides this, there is erysipelas. She, however, leaves the hospital in seven weeks—rather a long confinement for a young and growing person.

The fourth case presents a man in the vigour of life, thirty years of age, a smith, and therefore likely to be robust. This operation cannot be precisely called one at the ankle-joint, for the articulating surfaces of the tibia and fibula are taken away. The man goes on pretty well, though of course with a languid stump, till the sixth day, when we have, as a consequence of irritation and suppuration, set up in a part which has

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not sufficient vitality to fight against them, with probably sloughing of tendons, the declaration of deposit of pus in a vital organ—the lungs: he coughs up fœtid pus; an abscess forms at the inner side of the stump, and this burrows up about two inches. Then comes a second operation for the removal of more bone, whether with the saw or the pliers—it matters little—we are not informed; but in five weeks after the first operation the man dies.

Now, I will put the question to any candid inquirer, whether these four cases can be considered instances of successful operation? We have probably sloughing in all the four, erysipelas in three, and certainly death in two; and however convenient it may be to lay this latter circumstance upon some other cause than the operation, neither admitting it to be predisposing nor exciting, still, death occurring within a short period, and certainly before all irritation has ceased, whether this be from the original or a secondary disease, or from the surgical operation, is a very ugly feature.

It would really seem as though it were in surgery as in worldly affairs, that no man is willing to profit by the experience of others, but that each would insist upon purchasing it for himself. Be it so, by all means, if agreeable, in worldly matters, because there each individual reaps but his own discomfort and defeat; but in professional cases it is different, for it is at the expense of the welfare and lives of others that he stores his mind. And let it be remembered, that in our failures we sacrifice that which to the individual is his all, his heaven and his earth, his whole existence, that against which the consideration of the whole creation is as nothing. If I appear to speak strongly upon this point, it is because I feel so. There was a recent attempt to revive this justly obsolete operation at another of our large metropolitan hospitals, and there also was sloughing of tendons and erysipelas, and other consequences, which any one pretending to a knowledge of physiology and structural anatomy could not but foresee. Why, let me ask, should it be thought necessary to be continually bringing forward something new in our schools, when everything, however old it really may be, is new to those who enter the schools for the purpose of obtaining instruction? If there is a well-established maxim in surgery, it is, that in all amputations we should endeavour to bury the end of the remaining bone as deeply as possible in the flesh, consistently with the due rigidity of the parts; and yet we have now surgeons who propose to cover the bone with nothing but tendon, which, by reason of its want of elasticity, it is almost impossible to prevent from protruding from the wound and skin, which, of all structures, is one of the most liable to shrink, and has almost the greatest difficulty of any in preserving an independent vitality. We are told by the operator in the cases above noticed, that "part of the flap invariably sloughs, and that it is not quite ascertained whether the stumps ultimately form solid resting points." The former part of this statement is somewhat startling, for sloughing is a process extremely difficult, if not impossible, to control, and no one can say what amount of the flap it will destroy; hence the reason, as we have seen, why it was necessary to have recourse to second operations; nor could this, probably, have been avoided by making the flap smaller, for then it would not have been of sufficient size to cover the ends of the bones; at any rate, it seems strange that a surgeon should undertake an operation in which he should expect, as a necessary consequence, to have sloughing of the flap. The announcement of such a principle reminds me of an incident of which I was a witness, now some eighteen years ago, at the Middlesex Hospital.

Mr. Herbert Mayo, in operating for fistula in ano, had passed a sharp-pointed, curved bistoury up the sinus, and a finger of the left hand up the rectum, but, in making his incision, he cut his own finger; when he had finished with the patient, he began to look to himself, but, turning to the class, he observed that in this operation it was necessary for the surgeon to wound his own finger, and that without this it could not be properly performed. This was of course met with the same good-natured smile, which I trust this narrative, should it come to his eye, will excite in himself, for it is told with no unkindly feeling by one who cheerfully acknowledges to have received much useful information from his instructions. In regard to the kind of stumps we may expect from this operation at the ankle-joint, and their usefulness as resting-points, I should have thought that, had we neither tradition nor record to guide us, a little reflection would have sufficed to convince us that they can only prove a source of pain, and discomfort and embitterment of life to the unfortunate patient for the rest of his days, or, at any rate, as long as he preserves the limb in that state. Without claiming to be much stricken in years, I am old enough to remember as far back as the year of grace 1815; I remember that at that period, and for some time afterwards, there were to be seen, about the streets, numerous individuals, some on one, some on two wooden legs, with long stumps projecting behind, from amputations practised at the ankle; these were the results of "the pride, pomp, and circumstance of glorious war," conjoined with the equivocal surgery by which our fleets and armies were then visited. These unsightly and worse than useless projections gradually disappeared; in many cases, no doubt, by the decease of the bearers of them; and it is not unlikely that frequently, in cases where there was a predisposition to disease, the catastrophe was accelerated by the constant irritation arising from a hard bone being covered with little more than a portion of the organ of touch, and that in a state of abnormal tension; so that without any interference an almost constant state of pain was kept up, while any amount of friction, or the receipt of the slightest blow, amounted to positive torture; and so much was this the case, that though in those days anæsthesia was unknown, our public and private surgeons were besieged by these persons, beseeching them, with earnest instances, to remove this incubus, which allowed them rest neither by day nor by night. I was a child at the period to which I allude, but if these circumstances have since come to my knowledge, it seems difficult to imagine that facts so patent should not also have reached the ears of these would-be revivers of this miserable operation.

Now, let us suppose a patient with such a stump as this, and a patient, or sufferer, he truly is; let us suppose him, I say, lying on his back with the stump uppermost, while one with a hammer of the weight of his body administers, with a slight impact, blows on the end of the stump, and we shall then form a pretty accurate conception of what sort of "resting-point" the stump will form, for the mere weight of the hammer will be equal to the body resting on the stump, while the blow with impact will represent every step he takes.

I have entered at greater length on this subject than I had intended, though I can scarcely apologise for doing so. I should, from the deal I have seen, know something of surgery; but, be this as it may, it is but right, according to the excellent motto that you have adopted, that both sides should be heard, that some of your less experienced readers should be made acquainted with what may be urged against this proceeding. The talented writer of the "Mirror" con-

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cludes by saying that he has in reserve a fifth case, that "has not turned out favorably." I confess to considerable curiosity to see this last, for if those examined above are to be considered in any other light than unfavourable, the fifth act must be tragical indeed.

I trust, Sir, you will consider that my remarks are not misplaced, and I again disclaim any feeling against any one in particular, for it is against the operation solely that I animadvert, by whomsoever it may be performed; for though I would "nothing extenuate," neither have I "set down aught in malice." I have taken the reports as I found them in THE LANCET, endeavouring to use the identical words for my text, and am only sorry that I should feel it my duty to make such a comment.

I remain, Sir, faithfully yours,
JOHN CHIPPENDALE.

HOMŒOPATHIC QUACKERY.

IN pursuance of a resolution to publish everything relating to this subject which comes distinctly before us, we consider it to be right to bring under the notice of Sir James Clark and Dr. Locock the following extracts taken from one of the quack publications:—

"HOMŒOPATHY IN HIGH PLACES.

To the Editor of the

SIR,—Knowing that you gladly receive any information indicative of progress in a right direction, I venture to send you copies of two prescriptions that accidentally came into my hands at a watering-place in one of the eastern counties, where a malignant scarlet fever raged with fearfully fatal violence last year.

FOR SCARLET FEVER.

Sir James Clark's prescription.

'Extract of *belladonna*, five grains; *cinnamon-water*, two ounces. Number of drops according to patient's age, before breakfast, not exceeding twenty, in about two table spoonfuls of water.

Dr. Locock's prescription

For a boy ten or eleven years old, who was exposed to the infection.

'Extract of *belladonna*, three grains; *cinnamon-water*, 1½ ounces; of the solution twenty drops to be taken three times a day.'

Do the allopathic physicians, who prescribe homœopathically, give honour to whom honour is due?

I am, Mr. Editor,
A LOVER OF FAIR PLAY."

The following remarks are from the editor of the paper:—

"Most of our readers are fully aware of the fact that the practitioners of the allopathic school ever and anon resort to remedies given on the homœopathic principles.—*aconite*, *arnica*, and *belladonna* have been again and again given in this way by many allopathists. *The two eminent physicians, mentioned by our correspondent, have distinguished themselves by their gentlemanly forbearance and their courteous demeanour towards their homœopathic brethren.—Neither of them has ever made any difficulty of meeting in consultation, at the request of the patient, any homœopathic practitioner, not for the treatment, but for an opinion of disease.* Other eminent men of the 'Faculty' have no less stood aloof from the intolerant bigotry and insolent exclusivism of a certain class of allopathists."

*** In all probability Sir James Clark and Dr. Locock will not allow statements so injurious to their reputation to remain unnoticed and unrefuted.—ED. L.

REVOLTING ORDER RESPECTING ARMY SURGEONS.

To the Editor of THE LANCET.

SIR,—The medical officers of the army ought to make a stand against their being degraded by the Horse-Guards Circular, directing them to inflict punishment on deserters, by marking them with the letter D, "*propriis manibus*."

If this revolting order is tacitly acquiesced in, the infliction of corporal punishment by flogging will soon come to form a part of the duty (!) of the army surgeons. I have the honor to be, Sir,

AN UPHOLDER OF THE PROFESSION.

To the Editor of THE LANCET.

SIR,—I see by a circular memorandum from the Horse-Guards, dated August 19th, and published in the *Times*, that in future the branding of deserters is to be performed by the medical officers of the military prisons.

Henceforth then the medical officers of the army will take rank, and be associated in the minds of the soldiery, with the executioner.

For the honour of the profession I trust you will record this indignant protest from

AN ARMY SURGEON.

ADULTERATION OF PICKLES.

To the Editor of THE LANCET.

SIR,—Having heard of your laudable endeavours to expose the monstrous abuses in many articles of food, I am emboldened to call your attention to the serious injury to which the public health is exposed from the use of *acetic acid*, instead of vinegar, in the production of the article of *pickles*.

Pickles so manufactured soon grow mouldy by exposure to the air, and in a few days become unsaleable, and totally unfit for human food. Many persons, after removing the mould, apply fresh and good vinegar as a restorative, but only to meet with the mortification of a relapse to their former state, and their loss is often increased by the dissatisfaction of customers, who thereby discontinue their wonted favours.

It is surely high time some steps were taken to put a stop to so injurious a practice, and I feel satisfied it needs but your powerful pen to remedy the evil.

Respectfully yours,
VERAX.

THE NECESSITY FOR A COLLEGE OF DENTAL SURGERY.

To the Editor of THE LANCET.

SIR,—As the numerous London medical schools are about uniting all that talent can desire, as far as medicine, surgery, and physiology are concerned, and as most specific maladies will be especially attended to, is it not desirable to appoint in *every* hospital a qualified dentist, to lecture upon the first and second dentition? the maladies incidental to the teeth and gums, in a word, the hygeine of the mouth, ought to be made a specific study, as much as diseases of the eye, ear, or stomach; and many symptoms arise of toothache derivable from sympathy with the above organs, requiring discrimination and care in treating. I consider, by insisting upon the formation of chairs of dental surgery in each hospital, that our present degraded profession will be brought to its proper position, and by the instrumentality of such lectureships we shall secure to our branch men of science, and be the means, I expect, of founding a Dental College, where dentists must pass an examination to become

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respected members of our rising and important profession. Why such men as Messrs. Bell, Saunders, Robinson, Clendon, Tomes, and other authors, do not moot this subject, I am at a loss to know, as they could so ably edit a monthly dental periodical that would be extremely useful, and benefit our cause essentially, and probably be the means of forcing the aspiring dentists to become better educated and more valuable members of our present homogeneous class.

Hoping these few remarks will stimulate the above scientific authors to fresh exertions in behalf of dental science, I shall leave the affair in their hands, trusting that I may have aroused them from their present lethargy, and that I shall soon hear of something to the advantage of our numerous body.

I am, Sir, your obedient servant,

JAMES I. KEENE, Dentist,
Formerly Assistant House-Surgeon
Boulogne-sur-Mer, Sept. 1851. at St. George's Hospital.

P.S. I am aware that two or three metropolitan hospitals have surgeon-dentists attached, but all of them ought to have lectures given to the medical students. I am also aware, that in America there are valuable dental journals, but I think England ought not to be behind-hand, especially as they have a Dental College, and we have not! *O! mirabile dictu.*

Medical Facts, News, Items, &c.

THE LATE DR. KIDD.—By the death of Dr. Kidd, formerly professor of Chemistry, and since 1822 Regius Professor of Medicine, the University has just lost one of the most active of its men of science, who belonged, by their chief works and labours, to a former generation. Dr. Kidd did good service in his time, as his publications testify, in various departments of mineralogical, chemical, and geological research, and about ten years ago—his last appearance, we believe, as an author—he put forth some observations on medical reform. Dr. Kidd was one of the eminent men selected, under the Earl of Bridgewater's will, to write one of the well-known "Bridgewater Treatises," and we believe it has gone through more editions than any other work of the series. The subject was "On the Adaptation of External Nature to the Physical Condition of Man." Together with the Regius Professorship of Medicine, to which the mastership of Ewelme Hospital, in the county of Oxford, is attached, Dr. Kidd held the office of Librarian to the Radcliffe Library.

A STRANGE VERDICT AGAINST A PROFESSOR OF THE FACULTY OF MADRID.—Don Diego Argumosa, Professor of the Medical Faculty of Madrid, lately accused the Vice-Dean and Secretary of the same Faculty, of peculation, respecting the fees due to them at examinations, &c. The latter functionaries brought an action against the professor, the result of which was that Don Argumosa was acquitted, as it was proved that the abuses which he had pointed out really and truly existed. But it so happened that these very abuses had not been mentioned in the statutes, nor penalties framed against them. The court therefore condemned Professor Argumosa to two years' banishment from Madrid, eighteen miles being the nearest point he is allowed to inhabit, to a fine of one hundred duros, and to the loss of all emoluments, &c., during the period of his exile. Dr. Argumosa has appealed to a higher court.—*Boletin de Medicina, &c.*

THE ACCIDENT TO MADAME SONTAG.—We have been favoured by Dr. Glück, Physician to Her Majesty's Theatre, with some details touching the wound which was accidentally inflicted upon the forearm of Madame Sontag on the 12th instant. The wound being of the punctured kind, was of course the most likely to give trouble, to avoid which Dr. Glück had principally recourse to applications of ice. Although Madame Sontag had to sing the very next evening, and felt some uneasiness in the forearm when the performance became animated, she has just left for Germany in a pretty satisfactory condition. The wound was inflicted during the third act of *Otello*, the dagger used by Signor Pardini being, very accountably, much sharper than is necessary, or usual, in theatrical performances.

THE NAMES OF MEDICAL MEN GIVEN TO STREETS IN PARIS.—The habit of calling streets after celebrated men in the various branches of the arts and sciences, is a feature of some importance in the French metropolis. This homage paid to departed genius has certainly an excellent effect upon the mass of the population, and teaches them that there are other paths to glory besides the career brightened by military achievements. By a late regulation of the Prefect of the Department of the Seine, the Avenue of the St. Louis Hospital is to be called *Avenue de Rickerand;* the streets hitherto called Rue Bichat et des Recollets, are to bear the sole name of *Bichat;* the Rue de l'Observance, close to the Medical Faculty, takes the name of *Rue Antoine Dubois*, the celebrated surgeon; and the Rue de l'Hôpital Général, near the Lunatic Asylum of Salpetrière is now called *Rue Pinel*. Where are our Linacre, Harvey, or Sydenham streets; Hunter, Denman, Abernethy, Cooper, or Liston squares?

MUNIFICENT LEGACY.—Dr. Jecker, who has left various useful works on physiology and microscopical anatomy, has just died, and, by his will, gives the Academy of Sciences of Paris the sum of £8000, to found an annual premium, to be awarded to the author of the best and most useful work on organic chemistry.

SUICIDE WITH CHLOROFORM.—The Chief Physician at the Royal Hospital, Vienna, Dr. Reyer, was conversing, one day last week, with his colleagues, as to the least painful form of death, apparently in good health and spirits at the time; yet that evening he was found in his room a corpse, having put an end to his existence by fastening a bladder, filled with chloroform, round his mouth and nostrils, by means of a band of adhesive plaster. This is, as far as we can remember, the first time that chloroform has been used for suicidal purposes.

NEW PESSARY.—Dr. Gariel, in France, lately proposed a new form of pessary, which is of the following construction:—Two spheres of caoutchouc are connected by a little cylinder, in the middle of which is a stop-cock. Both spheres are quite lax when not filled with air, but they present the volume of a common globe pessary on insufflation. When it is wished to use the apparatus, one of the spheres is introduced through the vulva, which readily admits so compressible a body, and when the latter has been placed in the vagina, the second sphere, which is outside the vulva, is insufflated, the stop-cock opened, and the air pressed from the outer sphere to the inner one. When the latter is duly swelled out, the stop-cock is turned, and the atmospheric pessary gives the desired support. The emptied sphere lying outside of the vulva is then attached to the internal portion of the clothes.

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TO THE MEDICAL PROFESSION AND DEALERS IN MEDICINE.

Your earnest attention is requested to a branch of business intimately connected with success in the treatment of disease.

It is well known among *dealers*, and yet not generally known by the profession and the public, that pure and genuine medicines, particularly pure *powdered* drugs, from the first quality of gums and roots, are scarcely procurable in this country, and, therefore, physicians often prescribe without obtaining he desired and expected beneficial result. The article of Scammony is strongly illustrative of this fact. Almost all that is sold in this country is factitious, and sold for from seventy-five cents to three dollars per lb., while the pure virgin Scammony is worth from ten to twelve dollars per pound. This is the case also with chemicals. Quinine is often found largely adulterated (in some instances more than half) with Mannite and other substances. Blue mass and Calomel have been found much more than half adulteration. A gentleman once connected with an extensive manufacturing establishment, informed us that just before he left England, the factory turned out more than four thousand pounds of Blue Pill, containing Barytes, instead of Mercury; and it was all destined for the American market.

The importance of Chemically Pure Medicines is fully established, and yet they are scarcely to be obtained in any part of the country, as they are excluded by the low price of the ordinary chemicals. Indeed, several chemicals of great value in the treatment of disease, have almost fallen into disuse from the simple fact of their known impurity as furnished to the profession.

Precipitated Carbonate of Iron, a medicine in very general use, often produces effects directly the reverse of what is intended, viz: an irritation of the stomach, or derangement of the bowels, and sometimes even acting as an emetic, to the disappointment of the practitioner, who is thus led to suppose that the patient labors under an idiosyncrasy which renders the article incompatible, while these effects are entirely the result of the exhibition of the impure preparation almost invariably sold under that name.

Do not these facts sufficiently explain the inaction and sometimes the incomprehensible action of prescriptions? Knowing this matter to be worthy the first and earnest consideration of the practitioner, we would respectfully ask attention to the accompanying

CIRCULAR.

The recent law of Congress, in relation to adulterated Drugs, gives us the opportunity of bringing more generally to the favorable notice of Physicians and Apothecaries, our preparations of superior medicines, known as

"PHILIP SCHIEFFELIN & CO.'S EXTRA MEDICINES."

Our establishment having been in operation in this city for MORE THAN HALF A CENTURY, gives us the benefit of long experience to know the qualities of articles, and the wants of those who wish to dispense medicines of uniform strength. We wish to call particular attention to our Extra Powders, which are pulverized from selected roots and gums of the very best quality; and when necessary, every piece is broken and examined under our own immediate supervision, and consequently possess a purity hitherto unknown in this country, and a uniformity of action upon which the physician may rely with perfect confidence.

Powdered Jalap, extra (which is so frequently found adulterated or utterly worthless), is prepared by us from the roots of the true Mexican Jalap, and not from the spurious and inert roots and tops of the plant, which has been so commonly sold of late in our principal sea-ports. Our powdered Ipecac, extra, also, will be found much superior to the usual article of commerce, being made from the true Brazilian Ipecacuanah, and consisting solely of the active outer coating of the root, carefully separated from the ligneous parts, and from all other inert matters. In pulverizing Colocynth, extra, we retain only the active pulp of the apple, rejecting the seeds, which latter constitute the principal part of the weight of the fruit, and are nearly inert. Powdered Rhubarb, extra, we prepare from the best East India Rhubarb, which is culled over with great care, every root being broken to detect any unsoundness. The powdered Resin Guaiac, extra, is the pure Resin collected in tears, entirely free from the dross and dirt usual to the ordinary Guaiac of commerce.

The scammony, also, is powdered from an article differing in appearance, and very much superior to what is usually sold for Aleppo Scammony. Blue Pill bearing our label, will always contain one-third part of Mercury, and our Hydro-sublimed Calomel will be found to be of superior and regular quality

Care is taken to have these "Extra Medicines" not only *pure*, but of the *best* quality procurable.

When required, any of these articles can be obtained of us in their original state, as some may desire a superior article to use unpowdered.

The life of the patient, as well as the *success* and *reputation* of the *physician* and *apothecary* depend so much upon the prompt action of the medicines used in sickness, that we feel every confidence that any effort to furnish them with pure and superior drugs will be fully appreciated.

To preserve the preparations from being injured by the air and moisture, they are generally put up in bottles and jars, containing one pound each, and also in five and ten pound canisters. They should be kept as much as possible from the light.

It will be observed that the prices of these superior articles are necessarily higher than those of the ordinary kind, and physicians and merchants at a distance, when they wish this quality sent them, are particularly requested to write for the "EXTRA MEDICINES" of

Philip Schieffelin & Co., DRUGGISTS & CHEMISTS, NEW-YORK.

In order further to ensure the purity of our Powders, we have everything pulverized under our own inspection, and on our own premises.

EXTRA POWDERS.

AROMATIC POWDER, U. S. P.,
PULV. AFRICAN PEPPER,
" ALUM,
" ALLSPICE,
" ALOES, Cape,
" " Socot,
" ASSAFŒTIDA,
" ANTIM., Ref. Blk. Sulph.,
" ANGOSTURA BARK,
" ANISEEDS,
" BAYBERRY BARK,
" BELLADONNA,
" BLOOD ROOT,
" BITTER ROOT,
" BLACK ROOT,

PULV. ELECAMPANE,
" ERGOT,
" " 1 oz vials,
" EXT. COLOCYN'H, C'd,
" " LICORICE, Calab,
" FŒNUGREK SEED,
" GENTIAN ROOT,
" GINGER, Jamaica,
" GOLDEN SEAL,
" GUAIAC RESIN, from Tears,
" GUM ARABIC, Turkey,
" " GAMBOGE,
" " MASTICH,
" " MYRRH,
" " TRAGACANTH,

PULV. OPIUM, Turkey,
" ORANGE PEEL,
" ORRIS ROOT,
" PEPPER, Cayenne, Amer.,
" PEPPER, Black,
" PERUVIAN BARK, Loxa,
" " " Red,
" " " Calisaya,
" PRICKLY ASH BARK,
" PINK ROOT,
" PLEURISY ROOT,
" RHUBARB, Turkey,
" " E. India,
" RHATANY ROOT,
" SARSAPARILLA, Para,

☞ *See next page.*

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PULV. BORAX,
" BUCHU,
" CARAWAY SEEDS,
" CANTHARIDES,
" CANELLA ALBA,
" CARDAMON, (Seeds only,)
" CICUTA,
" CRANESBILL,
" CLOVES,
" CINNAMON, ordinary,
" " Ceylon,
" COHOSH BLACK,
" COLUMBO,
" COLCHICUM ROOT,
" " SEED,
" COLOCYNTH PULP,
" CUBEBS,
" DIGITALIS,

PULV. HELLEBORE, White,
" HYOSCIAMUS,
" IPECAC, (without the woody centre,)
" IPECAC & OPIUM, (Dover's Powders,)
" JALAP,
" KINO, True,
" LOBELIA,
" " SEEDS,
" MANDRAKE,
" MARSH ROSEMARY,
" MACE,
" MEZEREON,
" NUX VOMICA,
" NITRATE POTASS, Pure,
" NUTMEGS,
" NUTGALLS,

PULV. SAGE,
" SUMMER SAVORY,
" SWEET MARJORAM,
" SABINA,
" SENNA, Alex.,
" SENEKA ROOT,
" SCAMMONY, Aleppo, No. 1,
" " Virgin,
" " 1 oz. vials.
" SNAKEROOT, Virginia,
" SQUILLS,
" SULPHATE COPPER,
" " IRON,
" " POTASS,
" UVA URSI,
" VALERIAN, English, &c., &c.

Bottles and Cans at Cost.
When put up in ¼ and ½ lb. Bottles, at 10 cents per pound advance.

As many of the Gums, &c., are of *unusual purity*, for instance Guaiac, Aloes, Assafœtida, &c., &c., they are very liable to run together and become solid. Even the ordinary common Gums of commerce are so apt to run together that Drug-grinders usually grind with them some woody substance, such as Licorice-root, Gentian-root, &c., &c.

Some roots, that are rich in resin, such as Rhubarb, Jalap, &c., &c., are also apt to agglomerate. The Extra Powders being perfectly pure, and free from all foreign substances, are therefore more liable to become solid than the common qualities, but where they do so, we will replace them with others that are freshly powdered.

Pure Chemicals, prepared at our Laboratory.

ANTIMONY TARTRATE, Crystals,
" " Pulv.,
AMMONIA, AQUA,
" LIQUOR FORT,
AMMONIATED ALCOHOL,
" " Aromatic,
ARGENT NITRAS,
" " Crystals,
LUNAR CAUSTIC, Nos. 1, 2, 3,
FERRI CARB, Precipitated,
" " " Pure,
" SULPHAS, Pure,
" " Exsiccat,
IODIDE, ARSENIC,
IODIDE, LEAD,
" " Crystals,
" IRON,
" " Pure,
MERCURY, Bin Iodide,
" " " Crystals,
" " Protoiodide,
MORPHINE, Sulphate,
" Acetate,
GRANVILLE'S LOTION,
OIL COPAIVA,
OIL CUBEBS,
COLLODION, 1 oz. vials,
PRECIPITATED CHALK,
PRUSSIC ACID,
POTASSE NITRAS, Pure,
SPIRITS NITRI DULC,
SYRUP IODIDE IRON,
SULPHURET POTASSA,
VALLET'S FERRUGINOUS MASS,
ZINCI ACETAS,
ZINCI SULPHAS,
ZINCI CHLORIDE,
CHLORIDE SODA, de Labarraque,
CONFECTION ROSES,
CONFECTION SENNA,
BLUE PILL, Mass.,
UNG MERCURIAL.

We are also manufacturing Inspissated and Hydro Alcoholic Extracts, to correspond with our other goods, and in purity and efficacy, not equalled by any offered in this or any other market.

The Hydro Alcoholic Extracts are prepared by steam process, in such a manner that the valuable properties of the plant are preserved uninjured, and at the same time a consistence, color and taste is obtained, which is not found in the vegetable extracts now in common use, and which is a sufficient evidence of their superiority. Among them are

EXT. OF BELLADONNA,
" " BUTTERNUT,
" " BUCHU,
" " BLOODROOT,
" " CONIUM,
" " " SEEDS,
" " " GERMAN,
" " CHAMOMILE,
" " COLOCYNTH, Ordinary,
" " COLOCYNTH, Opt.,
" " DANDELION, Alcoholic,
EXT. OF DANDELION, Inspissated,
" " DIGITALIS,
" " GENTIAN, opt.,
" " " ordinary,
" " HYOSCIAMUS,
" " HOPS,
" " JALAP,
" " LUPULINE,
" " NUX VOMICA,
" " PINKROOT,
" " QUASSIA,
EXT. OF RHUBARB,
" " SARSAPARILLA, Simplex,
" " " compound,
" " PARA " Alcoholic,
" " HON., " Alcoholic,
" " STRAMONIUM,
" " " SEEDS,
" " ENGLISH VALERIAN,
" " DUTCH "

These Extracts, together with our Pure Chemicals and Extra-Powders, so favorably known throughout the Southern and Western States, have received the unqualified approbation of various Medical Associations, and of Physicians and Apothecaries wherever known. Their superior efficacy in all prescriptions, will be at once apparent to every one who reflects upon the difficulty oftentimes experienced in the administration of the common drugs of commerce, and the *loss of life* consequent upon the use of *inert remedies*.

☞ The great and increasing demand for Cod Liver Oil, and the difficulty of procuring the oil in its pure state, and such as we can guarantee to our customers, has induced us to send our agent to the fisheries, for the purpose of having the best article that can be offered in market. This article will also bear our label when put up in bottles, and be warranted pure, when ordered in bulk.

The value of this Oil, as a remedial agent in scrofulous affections and pulmonary diseases, is no longer a question—the daily experience of medical men, in its administration, only adds to its reputation.

In this, as in all articles upon which we place the guarantee of our name, we wish to be understood as offering, to the purchaser and consumer of medicine, the best of its kind that the market can afford.

TO DRUGGISTS.—IN ADDITION TO THE EXTRA MEDICINES, WE ALSO KEEP A LARGE AND WELL ASSORTED STOCK OF THE ORDINARY DRUGS AND MEDICINES OF COMMERCE, CAREFULLY SELECTED, AND THE BEST THAT CAN BE PROCURED. OUR ESSENTIAL OILS, AND OTHER LIQUIDS, WE OBTAIN FROM THE MOST RELIABLE SOURCES, AND ARE SUBMITTED TO EVERY KNOWN TEST FOR IMPURITIES; AND WE AVOID PURCHASING ALL AND EVERY KIND OF DRUGS IN THE POWDERED STATE.

OUR ARRANGEMENTS AND FACILITIES ARE SUCH THAT WE CAN OFFER INDUCEMENTS TO DEALERS, WHICH MUST INFLUENCE ALL, WHO NOT ONLY LIKE TO HAVE A FAIR EQUIVALENT FOR THE MONEY, BUT AT THE SAME TIME TO HAVE GOODS THAT *are* WHAT THEY *purport* TO BE, AND SUCH AS WILL BEAR THE STRICTEST EXAMINATION AND ANALYSIS.

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yours truly

Charles Hastings

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THE LANCET.

Journal of Medical, Surgical, and Chemical Science and Practice, Criticism, Literature and News.

MR. WAKLEY, M.P., EDITOR. J. HENRY BENNET, M.D., J. WAKLEY, JR., SUB-EDITORS.

IN TWO VOLUMES ANNUALLY.

VOL. II. NEW-YORK, DECEMBER, 1851. No. 6.

Clinical Lectures ON DISEASES OF THE CHEST,

Delivered at the Hospital for Consumption and Diseases of the Chest,

BY THEOPHILUS THOMPSON, M.D., F.R.S., PHYSICIAN TO THE HOSPITAL.

LECTURE VI.

Substitute for cod-liver oil; Inquiry regarding the relative value of different elements of the oil —carbon, bile, olein; Vegetable oils; Medical use of cold-blooded animals—turtle, viper; Animal oils; Instances of good effects from neat's-foot oil; sperm oil; lard oils; Advantage of adding phosphorus to vegetable oil; The long-continued use of oil often necessary to successful treatment.

AT our last lecture, gentlemen, I brought under your observation all the hospital patients at present under my care, who have for any considerable time taken cod-liver oil. They have all, though in different degrees, experienced benefit from its use; and you have been supplied with evidence of the reasonableness of the confidence in its virtues, now becoming so widely diffused. As I proceed to-day, you will perceive the reason why just at present there are fewer of my patients than usual on the cod-oil treatment. I was anxious to give you an opportunity of forming an opinion regarding the comparative value of some medicines which are, perhaps, analogous to this fashionable remedy in their properties. In determining on the direction in which such experiments should be made, we should first inquire on what property the virtues of the cod-liver oil depend. Let me call your attention to an analysis of this remedy.

The chemical hypothesis which would attribute the efficacy of the remedy to the supply of carbon thus afforded for consumption in the lungs, induced me some years since to try the effect of animal charcoal administered in doses of fifteen or twenty grains twice or thrice daily. As might have been expected, no advantage was gained, either as respects the local or constitutional symptoms, with the exception of one circumstance of interest—namely, the occasional relief of concurrent diarrhœa. This result is in harmony with the observations of Dr. Garrod on the power of animal charcoal to separate acrid substances from their solutions. The chemical theory above noticed has suggested the administration of carbon

Analysis of three kinds of Cod-liver Oil, by DE JONGH.

	Brown.	Light Brown.	Pale.
Oleic acid and brown substance (gauduine and two peculiar bodies)	69·78500	71·75700	74·03300
Margaric acid ...	16·14500	15·42100	11·75700
Glycerine	9·71100	9·07300	10·17700
Butyric acid	0·15375		0·07436
Acetic acid	0·12506		0·04571
Fellic and cholcic acids — some oleine, margarine and bili fulvin	0·29900	0·06200	0·04300
Bili fulvin and bili fellenic acid, & two peculiar substances	0·87600	0·44500	0·26800
A peculiar substance soluble in alcohol of 30°	0·03880	0·01300	0·00600
A peculiar substance insoluble in water, alcohol and ether ...	0·00500	0·00200	0·00100
Iodine	0·02950	0·04060	0·03740
Chlorine, with some bromine	0·08400	0·15880	0·14880
Phosphoric acid ...	0·05365	0·07890	0·09135
Sulphuric acid ...	0·01010	0·08595	0·07100
Phosphorus	0·00754	0·01136	0·02125
Lime	0·08170	0·16780	0·15150
Magnesia	0·00380	0·01230	0·00880
Soda	0·01790	0·06810	0·05540
Iron	a trace.		
Loss	2·56900	2·60319	3·09943
Total	100·00000	100·00000	100·00000

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in another form, in which indeed one might expect it to be more readily assimilated—that is, by means of large doses of syrup. I have not heard of any remarkable advantages derived from this expedient; and if my views regarding the remedy be correct, such advantages are not to be expected. If the virtue of the remedy we are considering be due to the presence of oleine, vegetable oils should exert similar efficacy, and I formerly administered olive oil and almond oil to a considerable number of patients with some hope of advantage. I was, however, completely disappointed. The olive oil frequently produced nausea, and I never observed any decided increase of weight, or amelioration of symptoms, which could be distinctly attributable to its use. Almond oil is less apt to nauseate, and agrees generally better than olive oil; but I could not trace any remedial effect from its use, and am inclined to believe that these oils have no important influence, and can only be regarded as sheathing the mucous membrane. An occasional discrepancy in the results of such experiments may be attributable to the use of lard oil in the adulteration of vegetable oils: for lard oil, although of all the animal oils probably the least curative, appears, judging from the few experiments which I have made, to possess properties more analogous than the vegetable oils exhibit, to that obtained from the liver of the cod. Those practitioners who have spoken with most confidence of the merits of vegetable oils, have combined them with iodide of potassium; and these oils may not be an unsuitable vehicle for this remedy, which unquestionably possesses efficacy in many forms of scrofula; but cod oil has virtues not to be confounded with those of iodine, and produces its best effects in cases where iodine is scarcely admissible. It is, moreover, worthy of observation that the comparative efficiency of the different varieties of cod-liver oil is not found to have any relation to the proportionate quantities of iodine they contain. It has been supposed that the biliary elements incorporated with the oils obtained from fish livers promote their efficacy; but I have not been able to discover any beneficial results from the addition of ox-gall to oils not obtained from the liver, although it is fair to acknowledge that I have not carried this experiment to any considerable extent.

In proceeding to place before you examples of the effect of other analogous remedies, it is my impression that you will be led to agree with me that fish oils generally resemble one another in medical properties. Popular observation is favourable to this opinion. A broth made by decoction of the common ray has long been used in the Scotch Highlands with advantage, in the treatment of rickets. Other animal oils, besides those obtained from fish, have enjoyed a popular reputation. In South America remedial efficacy is attributed to the oil of the condor, and in the backwoods of the United States to that of the rattlesnake; and it may not be inappropriate to mention, that I have been favoured with a present of oil of scorpions, as it is termed, obtained by infusing scorpions in olive oil, and employed with much confidence by the Spanish physicians, as an embrocation to the back in the treatment of ague.

The great naturalist Pliny speaks in terms of commendation of the virtues of the broth of sodden turtle in king's evil and swelled spleen. This broth, he says, has a power "Strumas discutere ac liènes tollere."

Other cold-blooded animals were, for many centuries, supposed to possess remedial efficacy. The flesh of the viper, for example, was employed from the very commencement of the Christian era. It was administered by the physician of Julius Cæsar. Galen believed it to be efficacious in elephantiasis, and our distinguished countryman Roger Bacon describes the case of a young German lady whose constitution was so impaired that her hair and nails came off, but who, by a persevering diet of viper's flesh, became in appearance younger and more beautiful than ever. Dampier in his voyages (vol. ii., part 1, p. 53) mentions that the people of Tonquin use, as a cordial, vipers and scorpions infused in wine. The learned Mead (Med. Works, London, 1762) observes that the physicians of Italy and France commonly prescribed the broth and jelly of viper's flesh to invigorate and purify the mass of blood; and he adds that it has a power and efficacy to scour and cleanse the glands of those stagnating juice which, turning to acidity, are the origin of many of those troublesome diseases called scrofulous, leprous, &c.; and that British physicians were too sparing of its use. Dr. Mead's recommendations were apparently disregarded, for not long afterwards viper flesh ceased to have a place in our Pharmacopeia; but even if this long-popular remedy was superstitiously introduced, it is quite possible that it may have possessed useful properties, and have been somewhat capriciously dismissed.

With a view to determine whether remedial efficacy was inherent in animal oil generally, as well as in that from the fish, it occurred to me, some time since, to try the effect of the oil obtained from the foot of the young heifer (neat's-foot oil.) In the first half of the year 1849, I recorded the weights and other important particulars of fourteen phthisical patients who were put under the use of this oil. Three of these patients derived essential benefit, the disease being arrested; four were slightly relieved, five received no obvious advantage, and two retrograded rapidly. You will find, on comparing these results with those obtained from other modes of treatment, that the benefit is greater than under any remedy excepting the cod-oil; and the similarity of the effects, in favourable cases, to those produced by the last-named medicine, will be rendered obvious by a brief narration of two of the most remarkable.

J. K., a tailor, aged thirty-four, unmarried, square-built, of middle stature and dark complexion, was admitted as an in-patient November 20, 1849; was born in Cork, but had been for fifteen years in London; accustomed to sleep

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in a close room, and to work in a confined apartment with from forty to sixty companions; always feeling faint and weak in the evening, and occasionally indulging in drinking bouts, which much impaired his appetite; for three years unemployed during the winter months; has had syphilis and gonorrhœa. His brother, who was accustomed to work with him, lately died in this hospital. He lost a sister, aged sixteen, from phthisis, and probably his mother at the age of thirty-eight. His father is living, aged sixty-one, and a sister, aged thirty-six, with a family of five children.

Physical signs on admission.—Respiration abdominal, with much tilting up of the lower part of the chest; little movement of the upper part. Left side, apex: expiratory murmur equal in duration to the inspiratory. Right side: percussion dull over the whole side. Amphoric voice above the mamma; amphoric respiration below. Legs much swollen from œdema. Has profuse night sweats, and expectorates about a pint in twenty-four hours, but has never had hæmoptysis. Four years since, he weighed nine stone five pounds, but since that time has gradually and for some months rapily lost weight.

Treatment.—Ordinary diet, with eggs, and an extra allowance of milk; cod-liver oil externally and internally. For the cough, blisters were applied, and he took in succession hydrocyanic acid, four minim doses of tincture of aconite in spermaceti mixture, and afterwards morphia, with which gallic acid was combined, with a view to moderate the perspirations; acetate of potash and decoction of broom were also given, on account of the œdema.

On the 29th of December he was still unable to leave his bed; and as the symptoms were aggravated, and his weakness increasing, I determined to give a trial to neat's-foot oil, thus combined: two ounces of neat's-foot oil, a drachm of solution of potash, six ounces of peppermint water; of this mixture, an ounce thrice a day. Under this treatment, the pulse, which on the 29th December was 100, gradually improved, being on January the 9th 84 and fuller, and on the 4th of February 80. At this latter date he was sufficiently improved in strength to go down stairs to be weighed, and was found to be seven stone five pounds and three-quarters. The weight steadily increased, being on February 13th seven stone six pounds; March 1, seven stone six pounds and a half; March 16, seven stone seven pounds and three quarters; April 16, seven stone nine pounds and a half. Three grains of tannic acid in infusion of cascarilla were given twice or thrice daily with apparent advantage; the expectoration gradually diminished to half the previous quantity. The respiration on the left side improved, and amphoric sound superseded the gurgling previously heard on the right. In the third week of April he left the hospital so much improved as to be able to resume his work. His blood was obligingly examined for me by Mr. Rodgers, who re-

Name.	Age.	Disease and Stage.	Date of Admission.	Commenced taking Oil.	Pulse. On Admission	Pulse. At present.	Bowels. On Admission.	Bowels. At present.	Weight. On Admission	Weight. Subsequently.
									st. lb.	st. lb.
P. D.	37	Phthisis, 1	Jan. 8	Jan. 10. Neat's-foot oil	78	60	Confined.	Regular.	9 13	Feb. 8...10 5 Feb.26...10 6½
W. U.	32	Phthisis, 1	Jan. 6	Jan. 11. Neat's-foot oil	72	100	Relaxed.	Regular.	10 7¼	Feb. 8...10 8¼
W. J.	14	Phthisis, 2	Jan. 18	Jan. 18. Neat's-foot oil	104	...	Relaxed.	Regular.	5 7¼	Feb. 5... 5 10½ Feb.26... 5 12
W. K.	46	Doubtful	Jan. 14	Jan. 15. Neat's-foot oi.	80	100	Regular.	Regular.	8 11¾	Feb. 7... 8 11
M.A.G	29	Phthisis, 2	Feb. 4	Neat-foot's oil	100	...	Regular.	Regular.	6 9½	Feb.18... 6 9½
E. B.	23	Phthisis, 1	Jan. 27	Jan. 28. Sperm oil.	80	80	Regular.	Regular.	6 10½	Feb.18... 6 10
H. D.	35	Phthisis, 3	Jan. 27	Jan. 28. Sperm oil.	78	100	Regular.	Confined.	8 0	Feb.21... 8 4¾
P. J.	22	Phthisis, 3	Jan. 30	Feb. 3. Sperm oil.	92	...	Relaxed.	Regular.	7 11½	Feb.20... 7 13½
M. M.	29	Phthisis, 1	Nov 25	Nov. 28. Phosphorett'd almond oil.	92	80	Regular.	Relaxed.	9 0¼	Feb. 8... 9 5
C. H.	41	Phthisis, 1	Feb. 4	Phosphorett'd almond oil.	88	76	Regular.	Regular.	7 6	Feb.18... 7 8

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Ported that there was fully the healthy average of red corpuscles; but that the bottle having been covered with animal membrane, some allowance should be made for the possible escape of a little serum.

T. G., aged twenty-four, admitted into the Le Blanc ward, June 24, 1850. Hereditary liability to phthisis on the paternal side. For eighteen months subject to cough and occasional hæmoptysis. Physical signs: chest flattened; left side, upper part, expiratory murmur nearly equal to inspiratory; right side, defective expansion; dulness on percussion; humid crepitation in infra-clavicular region; dry crepitation near the base of the scapula.

He had taken cod-liver oil for eighteen months, but as he was losing ground I substituted the neat's-foot oil, at first in doses of two drachms, subsequently half an ounce three times daily. His weight increased as indicated below:—

June 25th, eight stone eight pounds; July 1st, eight stone eleven pounds; August 15th, nine stone; September 7th, nine stone two pounds. He was dismissed generally improved.

It will be observed, that in the two instances just related, the good effects of the neat's-foot oil were manifested after cod-oil had been given in vain.

The cases now tabulated, of patients you have examined who have been taking other oils, would not alone be sufficient to authorize any positive conclusion, but the harmony of the results with previous observation enables me to present them with more confidence as a fair representation of what you may expect from the use of these remedies. [See table, previous page.]

H. D., a patient whose symptoms you have formerly investigated, is, you perceive, improving in appearance. She has gained nearly five pounds in less than a month. The principal medicine which she has taken is sperm oil, in doses of two drachms twice or thrice daily.

The same treatment has been adopted in the case of P. J., in whom pectorilary gurgling cough and cavernous respiration testify to the existence of vomica at the apex of the right lung. In about seventeen days her weight has increased two pounds, and her bowels, previously disordered, have become regular.

These results are very similar to those which we have learnt to expect from the administration of cod-liver oil, but not more marked than those which we find induced by the oil of neat's foot. Of three patients who have been under the use of that medicine for a month, you perceive from the table that one of them, W. J., has gained more than three pounds in weight; another, P. D., six; and in both these instances there is also in other respects as much improvement as could possibly be expected in so short a period.

M. M., a member of a consumptive family, and in whom you conclude, from the prolonged expiratory murmur below the sternal half of the left collar-bone, that phthisis has commenced, was put under the use of phosphoretted almond oil, a grain being dissolved in a pint of the oil, and two drachms of this mixture given twice or thrice daily with some advantage, especially as evinced by considerable increase of weight. The remedy has been discontinued in consequence of the bowels becoming relaxed. It is, however, doubtful whether this occurrence is attributable to the administration of phosphorus, for in several other instances it has not been observed: for example, in the case of C. H. Another patient, S. K., affected with phthisis in the third stage on the right, and in the first stage on the left side, took cod-liver oil first, for two months, as an out-patient, and subsequently in the hospital for about the same period; but she steadily lost ground, and her weight declined from eight stone twelve pounds, in August, to eight stone three pounds in November. I then substituted phosphoretted almond oil for that of the cod-liver, and in a week the pulse became slower and the weight increased. The amelioration, however, proved temporary, and she left the hospital only slightly benefited. I am sorry to say, that in most of my experiments with phosphoretted oil this has been the result; as though the phosphorus, although affording a favourable stimulus for a short time, yet had its good effect from some cause or other speedily exhausted.

In the table of the constituents of cod oil, you will observe that phosphorus enters in sufficient quantity to deserve attention. Whether this substance be inherent in minute portions of liver intermixed with the oil, or is a natural element of the remedy, may be a question; but it was this circumstance which induced me to try whether the addition of phosphorus would in any way assimilate the effect of this vegetable oil to that of the oil from cod's liver; and although the benefit derived has proved transient, it is sufficient to warrant a repetition of the experiment. There may be cases in which a favourable turn may be given to the condition of the patient by its use, and the way be thus prepared for the successful adoption of other measures; and I cannot help suspecting that the phosphorus present in cod oil does contribute some share to the happy influence of that remedy. There are, indeed, scientific reasons for suspecting that the introduction of phosphorus into the system may exert an influence on the respiratory process and on the condition of the blood. The important function of the lungs is to convert venous into arterial blood. It has been long known that oxygen is engaged in the production of this change. Dr. Stevens, however, showed that another cause—namely, the presence of neutral salts—could accomplish the change, even when no oxygen was introduced. It has been further proved that more oxygen is absorbed during respiration than is accounted for by the quantity of carbonic acid exhaled. How are these facts to be harmonized? I suspect that some experiments of Dr. G. O. Rees (*Brewster's Journal of Science*, vol. 33), which appear to me replete with interest, may assist us in explaining the relation of these facts. Dr. Rees has shown

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in those observations that venous blood contains much phosphorized fat, but little phosphate of soda, whilst arterial blood contains a small proportion of phosphorized fat, but a large amount of phosphates, an important part of sanguification appearing to consist in a gradual conversion of the alkaline lactate and albuminate of soda present in the chyle, into phosphates.

If there were time to indulge in speculation, I might suggest several practical applications of the conclusion above mentioned; but I will content myself with starting the inquiry, whether an additional supply of phosphorus, by attracting oxygen in the process just noticed, may not tend in consumptive patients to lessen the unfavourable oxidation by which pus is largely formed in the lungs. An excess of oxygen in the lungs is considered favourable to the process of suppuration; but if any superfluous oxygen is occupied in the conversion of phosphorizing fat into phosphates, the healthy processes might be promoted in consequence of that very excess, and the occurrence of the super-oxidation which would produce pus be prevented.

Such observations and experiments as I have to-day brought before you, are not subjects of mere curiosity. The analogous actions of the different remedies introduced prove them to contain similar elements. By contrasting the composition of these substances, we may obtain a key to the discovery of the cause on which their common influence depends, and may apply the knowledge thus obtained to the discovery of a new set of facts which might otherwise have escaped us. Thus the similarity of the influence of neat's-foot oil and cod-liver oil may help us to discover what constituents are unimportant and what essential to the remedial effect of either of these oils.

Let me incidentally mention that the addition of cow-heel to broths appears considerably to increase their nutrient efficacy, and to be well adapted to the consumptive.

The conclusion to which the observations just detailed conduct us, is, that the other varieties of fish oil differ from that obtained from the liver, rather in the degree of palatableness and agreeableness to the stomach, than in any essential difference of virtue; that neat's-foot is less strictly similar; modifying the blood indeed in a corresponding manner, but differing from the liver oils in degree of aptitude for assimilation according to peculiarities in the animal stomach. It may therefore be regarded, not so much as an equivalent as a rival to the cod-liver oil. Where cod oil fails, sperm or whale oil would probably be useless; but the failure of the oleum jecoris aselli is no proof that the oleum bubulum may not be administered with the hope of advantage, and from its greater cheapness it might be largely tried in the way of inunction. Either oil may sometimes be advantageously substituted for the other; and although that of the cod will in the majority of cases prove most effectual, I think you are now in possession of facts showing that the neat oil is likely to prove a useful addition to our medical resources, and that both these oils probably act similarly, in combining with albumen and assisting in the supply of the chyle granules which enrich the blood.

After impressing on you the remarkable efficacy of animal oils when properly administered, it may be right to guard you against expecting too much from their administration in cases not presenting circumstances requiring their use; and here I may quote a little of the wisdom of our ancestors, as it found expression in "a Serious Conference between Scaramouch and Harlequin, by Momophilus Carthusiensis;" London, 1719, p. 25;—

"*Scaramouch:* I take that discovery of the benefit of oil and its application to have been the greatest that hath for a long while been made in the medicinal art, and yet you would fain make it ridiculous and useless.

"*Harlequin:* Indeed, Scara', it is he that makes it ridiculous and useless by giving oils in all cases. Their use is as old as physic, and physicians in all ages have taken care to let us know when they are of benefit and when noxious. Dr. Woodward alone has made oil a panacea, and I never yet saw any pretensions to a universal medicine where there were any to common sense."

I cannot conclude this lecture without a word on the importance of the persevering use of animal oils when they are found appropriate. We must give them, sometimes alternated with steel or other tonics, even for many years, if we would overcome the liability to a return of the symptoms. The necessity and advantage of such a plan are well portrayed in a letter now in my hand from a patient who was under my care during the summer of 1848, affected with vomica. In spring, 1849, he resumed work, and with an interval rendered necessary by an attack of bronchitis, has continued working in a manufactory till the present time.

He gained twenty pounds in weight during his stay in the hospital. The longest period during the last three years that he has omitted the oil was nine weeks, during which he lost ten pounds' weight, but on resuming it he gained three quarters of a pound in weight every week for a considerable period. He writes: "I sometimes give the stomach a rest from the oil for a fortnight, but whatever diet I then take there is a falling-off. When I have a false appetite an hour after a meal, a good dose of oil upon ginger wine fails not to remove it." He adds: "I get the oil both pure and cheap. Mr. H., my surgeon, provides it, and a benevolent lady, Mrs. B., pays the bill." Is not this one of the best kind of self-supporting dispensaries?

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NOTES
FROM
A COURSE OF LECTURES
Delivered at St. Thomas's Hospital,
By GILBERT MACKMURDO, Esq., F.R.S.,
Surgeon to that Hospital,
and to the Royal London Ophthalmic Hospital.
(Continued from p. 349.)

LECTURE XVIII.

Diseases of the Eyelids and Adjacent Parts.

Inflammation of the eyelids may occur in various modes: thus we may meet with it of an erysipelatous or phlegmonous character, and more rarely we see it presenting a gangrenous or phlebitic form. Syphilitic and cancerous inflammation come more frequently under our observation. In the first, the erysipelatous inflammation, the eyes are closed by the swollen state of the lids; their colour varies much in different cases; it may be of a bright red or a pale hue, and on pressure the colour will temporarily leave the lids; serum is generally more or less freely effused under the skin. The pain which accompanies this condition is seldom severe, but the patients complain of a sensation of much discomfort rather than of severe pain. The serum occasionally escapes in consequence of the skin yielding; if this does not take place, a more deeply-seated inflammation goes on, and sloughing sometimes follows an imperfect suppuration. I have occasionally seen children who had suffered for a considerable time under such a condition without being attended to, whose lids were seriously damaged by the destruction of the cellular tissue by sloughing. If the serum had escaped by the skin bursting, dry crusts would have formed, and the result would have been more favourable. The eyelids in these cases suffer at their edges severely: the duets also become obstructed, and sometimes seriously injured during these attacks. Occasionally the erysipelas is continued on to the face and scalp, having already attacked the whole orbital cellular tissue, and suppuration may or may not supervene in such cases. The general characteristics of this affection are now observed, such as shivering, febrile action, derangement of the different secretions, &c. Exposure to sudden chills, or injuries by bites or stings of small insects, are frequent causes of these attacks. Children's eyelids often suffer from the phlegmonous inflammation, and abscesses form quickly, which require the early liberation of the pus In all these cases calomel and antimony may be given with discretion, and diaphoretics, or Epsom salts and tartar-emetic mixture, if the party will bear such medicine. Cold bread poultices between two pieces of muslin sometimes relieve the heated lids; leeches are undesirable. Occasionally we find it expedient, in cases of erysipelatous inflammation, to make incisions along the lids, of various lengths, and by these we get rid of the fluids and of the sloughy cellular membrane, and thus save the lids. Mr. Lawrence published, some years since, several cases bearing on this point of practice, and he proved by them its great efficiency; also warm fomentations relieve the patients considerably, and we likewise in some cases paint the lids with a weak solution of nitrate of silver. I have occasionally applied the caustic, in substance, lightly on the skin round the lids, and I have thus prevented the disease spreading farther. Sometimes surgeons make numerous punctures in the lids, and this practice is reported to have been very beneficial also. The gangrenous inflammation is happily rare; it occurs in old and feeble individuals, and I have seen it attacking the eyelids of old drunkards. As for the phlebitic form, although it is usually described, it must be even more rare, for, with all the opportunities I have had of seeing the various forms of ophthalmia, I do not recollect ever seeing a case of that nature. Likewise we hear of the malignant pustule of the eyelid as being common amongst those who attend much on the lower animals, but I cannot speak of this affection from any experience of my own: it has been thought to have some similarity to the glanders. French authors speak of it as a recognised affection, and they describe its destructive characters in very similar terms to that of the glanders in the human subject, as known in this country. When the eyelids are alone attacked, they are quickly destroyed, and the eyes are left unprotected; and it is recommended by these writers that crucial incisions should be made, and the cautery be applied at once. In such cases the general health and strength should be attended to very promptly. We sometimes meet with an appearance like a common carbuncle on the lids, and this should be treated by early incisions, poultices and liberal support, medicinal and dietetic: poppy fomentations mixed with the poultices will soothe the sufferings of the patients in these cases.

Syphilitic disease often shows itself in the eyelids of patients suffering from this poison; in some cases the different tissues quickly yield to this form of ulceration, and a great portion of the lid will be destroyed; in others, large sores have occupied the conjunctival linings of the lids. Our opinion as to the nature of the case is generally strengthened by the patient suffering at the same time from secondary eruptions and pains, &c. Sometimes I have seen the ulcerations situated near the inner canthus, and it has proceeded slowly but steadily, in spite of all my attention to it; and after cross-examination, I have obtained a confession from the patient of the existence of some other venereal symptoms which were not at first apparent. We often notice children's eyelids very sore and scabby, and at the same time we observe the skin of the face and other parts of the body peculiarly marked, and even indented, and the skin is sometimes wrinkled. You will recollect that I showed you the infant who recently was in Lydia's ward with her mother: the child's body, and particularly the nates and anus, were peculiarly marked, and very sore; the

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lips, nose and eyelids also presented several excoriations. In such cases, if the child is being nursed, we treat the child through the system of the mother; and if otherwise, by a very mild mercurial treatment, warm fomentations, and mild mercurial ointment to the edges of the lids. If the patient is an adult, we treat him as we should any other patient labouring under a secondary form of syphilis.

Cancerous affections of the palpebræ are unhappily not very rare. We see them generally, but not always, in elderly persons. The ulcerative stage follows the indurated condition, which indeed in some cases continues for a long time without the parts yielding to ulceration: the patient at first complains of a hard swelling at either corner of the eyelid: more frequently it is near the nose, and in the under lid, but I have often seen it in the upper one also. This condition may last for some time almost unheeded by the patient; gradually a swelling may appear, still very small, or the skin may have been rubbed off, and a raw surface may be left: slowly and very gradually in most cases, but more rapidly in others, the lid is ulcerated to a great extent: it may involve the carunele, and then the other lid, or it may destroy the whole of the lid which was at first affected; and it is a curious fact that patients do not seem to suffer so much with this as with other cancerous ulcerations: the disease may be checked in some cases for a very long period.

I have had an old man under my care for several years past, who has been in this hospital three or four times for several months, and on each occasion he has left us somewhat benefited and in good spirits; but on each re-admission the lids have been to a greater extent destroyed. He has never suffered that exerueiating agony which other cancerous patients complain of. His is, however, a happier case than the majority, for we occasionally see patients who have lost the whole of each of their eyelids, and who also have the ulceration spreading downwards on their cheek and towards their mouth, destroying all before it. I have sometimes known, as in the case of the old man I just now spoke of, cicatrization go on, and the parts have appeared tolerably sound, but again ulceration has appeared without any assignable cause. There is not much discharge from these ulcerating surfaces, and that which does issue looks like poor and unhealthy pus. We mostly see this disease in unhealthy persons, but it is not always so. I might weary you if I attempted to mention a tithe of the numerous applications that have been recommended and tried by surgeons on the one hand, or by empirics on the other.

Where the ulceration is slow in its progress, and where much devastation has not already been effected, I should certainly propose to excise the part, provided I could clearly remove the whole of the diseased portion, and a little more. I have now under my care a gentleman who came to me with cancerous ulceration of the lower lid several years since, and he has continued as my patient up to this time. I removed the diseased part, it healed well, and he was many months free from pain: it then began to worry him again; his pain increased; a second elevation and small ulceration appeared, and I again (after he had consulted with Sir Benjamin C. Brodie) removed it with great success; and a third and a fourth time, at his earnest request, I repeated the operation, always with the interval of many months. On each occasion the wound was healed but slowly. As you might expect, there is now some contraction and induration of the lid, but this only very slightly inconveniences the patient, by pressure on the lower part of the globe. Since the fourth incision I have two or three times applied a pencil of lunar caustic to a small unhealthy elevation, which I suspected would ulcerate, and I have applied zinc to it, and it has already disappeared. Of course I very carefully attended to his general health during the whole period. I mention this case as being one of excessive interest, for the patient is highly educated, and unfortunately had read much respecting cancer before consulting me; and he comes to me repeatedly in dread of a recurrence, and of his having his face a mass of ulceration, and then gradually sinking a victim to his disease. At this time the lids look pretty well; but I, as well as he, though I dare not tell him so, look forward to the future with dread.

This case is not an uncommon one, however sad; but it would be useless to occupy your time with the repetition of others. In some cases we relieve the patient by soothing applications and by attention to the general health, and the disease disappears for a time and then re-appears. Sulphate of copper, nitrate of silver, chloride of zinc, arsenic, mercury, antimony, hemlock, iron, and acids in all their various forms, have at times been applied, and a temporary check to the ulceration has been believed to have been effected. The application which has appeared to me to have been of most use has been the chloride of zinc, and in some cases I have at last obtained a healthy surface. I have also seen some temporary benefit result from the application of a paste of the carbonate of iron.

Quitting now the consideration of this dreadful form of ulceration, our attention may be next directed to a very common and troublesome, but not dangerous affection. I refer to the simple inflammation of the edges of the lids: we are in the habit of calling it *tinea;* others have called it *psorophthalmia* or *ophthalmia tarsi*, and even the term scabies palpebrarum has been sometimes very incorrectly adopted. The Meibomian follicles are the parts chiefly affected; the patient complains of a soreness of the edges of the lids, and sometimes of their itching to a painful degree; the secretion becomes vitiated and thickened, the eyelashes stick together, and are loaded with viscid and gummy crusts. This irritation generally causes more or less lacrymation. On examination we find ulceration going on at the roots of the lashes, and the lids become thickened at these

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parts. As the ulceration spreads, the whole of the edges of the lids become affected, all the lashes become loosened and fall out, and gradually the eyelids present raw edges, destitute of any ciliæ. This extreme condition has been termed lippitudo ; and when we see patients for the first time in whom the disease has proceeded thus far, we at once feel assured that no art of ours can restore the natural condition of the parts; the follicles have been destroyed, and the ciliæ will never be reproduced. Children are the parties whom we generally have to treat for this affection ; and if we see them in the early stage, and if their friends will obey our directions, the little patients may be entirely cured. They generally require some alterative, and afterwards some tonic medicine. Their eyelids should be regularly washed with warm water or milk and water; a bread poultice may be applied for a short time in some cases, and the attendant may easily detach with a needle, or any similar assistance, the gummy matter which is lying on the edges of the lids. When this is completely removed, the diluted citrine ointment is the best application : the strength may vary with the surgeon's views of the case. The red precipitate or the zinc ointments may also be used, but they do not act better than the citrine ointment. We afterwards use astringent collyria, such as I have mentioned before to you, and we occasionally touch the ulcerated parts with nitrate of silver in substance or in solution, with great advantage.

We sometimes remove the eyelashes with our forceps, and this is a useful precaution, as we can then apply our remedies better. If the disease has gone on unchecked for a considerable period, we sometimes find three or four little abscesses at the edges of the lids ; and when we try to open the palpebræ, we cause much pain to the child, and some bleeding will occur from the highly inflamed edges. All these aggravations produce more or less conjunctivitis, and thus the troublesome symptoms of chronic ophthalmia appear, of which I some evenings ago spoke at length.

Trichiasis is one of the unfortunate results of neglected tinea : the ciliæ take irregular directions, and some of them will pass inwards against the cornea, and set up inflammation, which often causes temporary or permanent opacity. We remove from time to time the offending hairs with our forceps, if they be not many ; but if they be numerous, and the patient wishes for a radical cure, the inner edge of the tarsus may be very carefully removed ; but this is a painful and a rather difficult operation, as it is important not to take away too much of the edge, and not to leave a rough edge, which would of itself annoy the patients considerably. Patients sometimes complain of irritation from causes which are not at all at first apparent ; but on examination we perceive that they have some colourless lashes quite on the inner edge of their lids, and on our taking them away, immediate present relief is given ; but sometimes we see whole rows of lashes behind the natural set; these grow irregularly. This condition is called distichiasis, and it generally occurs in those who have long suffered from tinea, &c. Some surgeons have thought that it never exists congenitally ; but I have a few times seen it in persons who have never suffered from any ophthalmia. In such cases it would be absurd to interfere with them ; but if this second row of hairs passed backwards and irritated the eye, it would be advisable to operate, as for entropium, of which I shall presently speak. I have occasionally seen pediculi in the eyelashes of dirty children, who were themselves a mass of filth, and whose eyelids were ulcerated also ; this is spoken of as being a very rare occurrence, but I suspect that those surgeons who have so considered it, have been spared the disagreeable task of seeing so many dirty individuals as has fallen to my lot from my office of surgeon to two large prisons for so many years. A little mercurial ointment soon destroys them. Also very young children suffer from crusta lactea, or porrigo larvalis, which also affects the face simultaneously ; the eyes may be treated as for common ophthalmia, and a lotion of oxide of zinc with mucilage and water, as follows :—oxide of zinc, twenty-four grains ; mucilage, one fluid drachm ; water, seven fluid drachms. Mix. This is a very useful application occasionally.

Scrofulous subjects, particularly children, are liable to have styes, as they are popularly called (hordeolum is the proper term.) This is, in reality, a small boil at the edge of the lids. Sometimes several exist at the same time. They are of a dark red colour ; much pain, heat, and itching are complained of ; it progresses slowly, and at last suppurates and bursts, or is opened, and the part then soon heals. In some instances, when this little abscess has not been quite emptied, a hard white lump remains, to which old authorities gave the name of grando. Before suppuration has taken place, cooling applications may be tried ; but if matter has formed, it is better to open the part at once, squeeze out the contents, and apply the point of your caustic pencil to its interior. I have seen a few cases accompanied with some degree of fever and much irritation, but in themselves these affections are of no consequence if treated properly.

After different affections of the lids, or after scarlatina, erysipelas, &c., we sometimes see them œdematous. In most cases stimulating applications and tonic medicines, well persisted in, will, to a great extent, remedy this inconvenience. Eau de Cologne, brandy, common spirits of wine, lavender water, and different aromatic applications, have each in their turn done good service in such cases. I have seen some cases of emphysema palpebrarum resulting from violent blows on the forehead or nose, but they have soon recovered.

A case of tremulous involuntary motion of one or both of the eyelids is occasionally brought before us; it may be excessive or very slight. I have seen the whole side of the face moving at the same time in one case, and in another merely

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one of the lids. It is not a painful affection, but it is generally increased by the attention of the patient being called to his condition. This is not owing to a state of paralysis of the muscles of the opposite side of the face, but rather to an affection of the facial nerve on the affected side of the face, so that the muscles act spasmodically. I have known some persons exhibit this peculiarity, more or less, for years. I might mention to you several public legal and medical characters who are now examples of it. Where the affection has been excessive, depletion behind the ear has been beneficial; but a careful diet, without stimulants, and regular habits, with mild alteratives and tonics, should at first be tried; and these will generally assist us in the treatment of this troublesome affection. Sometimes the levator palpebræ contracts and becomes relaxed in succession rapidly and involuntarily; to this we give the name of morbid winking or nictitation. At other times we find a patient whose eyelid is spasmodically closed, and it presses on the eye so firmly that it occasions much pain to the patient, and this has been called blepharospasmus. Both of these states result frequently from a damaged condition of the nervous system, but this again may result from many causes, as overwork, distress of mind, uterine irregularity, or diseases of any of the digestive organs. It very frequently occurs in delicate young women. I lately had under my care for a considerable time, a young lady of a highly nervous temperament, suffering with this spasm of the orbicularis. Sometimes I seemed to be conquering this affection, and then it was as bad as ever again. After attending to the general health, I gave her a variety of tonic medicines. Iron in its different forms seemed to suit her best; warm opiates, fomentations of different kinds over the eye, also relieved her sufferings; but I am persuaded that we have much to contend with, in many of these cases, in the mind of the patient.

The cause of this condition is a paralytic state of the muscles of the eyelids, arising from disease of the facial nerve within or without the skull, or from injury to that nerve by pressure or wounds. In some cases the eye is left more or less open (lagophthalmos.) The upper lid in other cases drops; this may result from various causes. We name this condition ptosis; it may result from paralysis, or mere want of tone, or even from a hypertrophied condition of the lid. This last kind results from effusion into the substance of the lid after ophthalmia, which becomes much thickened, and hangs down in a thickish fold over the globe. I have many times greatly benefited patients thus affected, by cutting out a considerable portion of the lid transversely, having enclosed in the convex-edged forceps which we use for entropium a sufficient quantity of the integuments, and then cut it off with the curved scissors. The edges of the wound are then united by sutures, and the patient in some cases can instantly raise his eyelid; at any rate he is always able to do so after a very short interval. When the ptosis has resulted from injury to the levator palpebræ or the third nerve, it has been proposed by Mr. Hunt, of Manchester, to make one transverse incision higher up, nearer the eyebrow, and a second one lower down, nearer the edges of the lids; the intervening portion was to be detached, and the integuments were then to be brought together. The purport of this operation was to bring the eyelid under the influence of the occipito-frontalis muscle. I have not seen this operation performed, but it was an ingenious proposition. Where a want of tone has occasioned the ptosis, as after fevers or wasting illnesses, I have known patients recover the power of the levator as they recovered their general strength. Slightly stimulating applications have appeared to assist in the cure. The paralytic form may be cerebral or rheumatic: the former should be treated as a cerebral disease; the latter may arise from sudden exposure to cold, and we also, in this condition, employ mercury, depletion, and counter-irritants, with stimulants to the lids.

We sometimes see persons who suffer inconvenience from having a large fold of skin which is attached to the two lids, and which lies over the inner corner of the eyes so as to cover the caruncle; it has been called epicanthus. I never saw this existing to such an extent that it demanded any operation; but it has been proposed to remove an elliptical fold of skin at the top of the nose, between the eyes, and then bringing the edges together would, I doubt not, in some measure remove the deformity. Patients may suffer with ectropium from various causes, as inflammation, excoriation, cicatrices, or even caries of the bones of the orbit. Of the first form we have a good example in children affected with purulent ophthalmia. Either lid may be everted temporarily; but as soon as the inflammation is subsiding, the swollen state of the conjunctiva is relieved, and the parts very generally resume their natural position without any especial treatment. This is hastened sometimes by our making several incisions along the everted parts, and thus emptying their vessels of the blood which was distending them. Astringent applications should be used afterwards, but in some instances old chronic cases of ophthalmia exhibit a great thickening of the lining conjunctival membrane, which lies in folds; this at first separates the lid from the globes, and afterwards causes its eversion.

After the treatment above mentioned has been adopted, a cure may be completed by taking a wedge-shaped portion out of the tarsal edge, which has been much stretched. We pass an armed needle through the centre of the edges of the lid, and then holding the lid away from the globe, we remove, with the cataract-knife, a requisite quantity of the lid and tarsal cartilage, and then, by bringing the edges together with fine silk, we get rid of the cause of the eversion, and the silk may be removed on the second or third day. That form which results from excoriation may occur at all ages after long-continued

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ophthalmia, with much lacrymation and more or less destruction of the integuments of the face. After the ophthalmia has been removed, we try many different escharotics in turn, such as nitrate of silver, sulphate of copper, or sulphuric acid; but this last must be applied with extreme care. Successive applications of these cause successive contractions. In some cases we cut away with scissors a large fold of conjunctiva alone. I have often relieved eversions which have arisen from cicatrices, with much destruction of the lids, by autoplastic operations. It is necessary in such cases that the substituted skin should appear to be much more than enough to replace that which was destroyed, for it will afterwards contract considerably. In one case of this kind under my care, the whole upper eyelid was lost, the tarsal cartilage was adherent to the eyebrow, the cornea was ulcerated from exposure, and the eye would soon have been destroyed. I dissected away a large flap of integument from the temple, and turned it round, having previously detached the tarsal cartilage from the eyebrow; I then attached the edges of the flaps between the ciliary cartilage and the eyebrow, and the inner angle of the eye towards the nose. The union went on most favourably, and the poor woman comes to me now occasionally to show herself at the Ophthalmic Hospital, with her eye well protected by a useful eyelid. She elevates it by means of the occipito-frontalis muscle, and she by habit has the power of raising the under lid to meet the other, and cover the eye when desirable.

We meet with many varieties of these eversions and unnatural attachments after different injuries, or syphilitic disease, or caries, and we have to vary our operations accordingly. Inversion of the eyelid (entropium), the reverse of the last-mentioned affection, is a very painful and irritating condition of the lid, as the eye is constantly suffering from the eyelashes rubbing against it, and more or less pain, lacrymation, and general ophthalmia follow. It results very frequently, in elderly or feeble persons, from a loose state of the skin of the face; also in younger persons it may occur from a contraction of the tarsal cartilage, or a thickened conjunctiva, or a cicatrix after injuries by lime or other escharotics, or after long-continued strumous and catarrhal ophthalmia, &c. If neglected, the cornea becomes nebulous, vascular, and ulcerated; the sufferings of the patient will be very severe, and the eye will eventually be lost. We have a palliative and a radical mode of treatment. The first is effected by applying court-plaster over the edge of the lid, and then on to the cheek, and thus retaining it for a time with its edge turned outwards; and we also sometimes effect this by applying a piece of stiff silver wire bent as the under half of a spectacle frame. It passes along the under margin of the lid transversely, and the other end may pass either under the jaw or over the nose to the other side of the face; but patients do not much like this latter application.

Another mode of treating cases is the application of sulphuric or nitric acids, so as to destroy the integument only below the lower lid, and then produce a cicatrix which may permanently draw the edge outwards. I have known this plan prove efficacious occasionally, but a plan which we more frequently adopt, is the removal of a transverse fold of the skin by means of the curved forceps and scissors, in the mode I have already described, and this generally proves successful. You must be prepared to have a little ectropium at first, or the patient will soon again suffer from entropium. When the tarsus is contracted, we divide it vertically with a cataract-knife, and if it be the upper lid, we remove first a fold of the skin, and then attach the cut edges of the tarsus to the transverse upper wound. We thus at first leave a triangular opening over the cornea; but we have turned the edges of the tarsus outwards, and gradually the parts re-assume their natural shape. Mr. Guthrie, for the cure of the curved tarsus, adopted the plan of dividing the lid at each angle, and thus relieving the inverted parts. [This, and the other operations referred to, were now described by the lecturer.] Others have adopted the severer practice of removing the whole of the tarsal cartilage. I have seen this performed a few times, years ago, but it always leaves a considerable deformity, although it relieves the patient of the inversion. I much prefer the plan of removing the inverted ciliæ by excising the inner edge of the lids with their bulbs. After different injuries, the lids become attached either to each other or the globes of the eyes (anchyloblepharon and symblepharon); these states may occur separately or conjointly, and with many varieties. If we can ascertain that the patient can freely move his eye under the lids, we feel justified in separating them by operation, but unfortunately, in the greater number of cases, the cornea has become opaque, or adherent by some bands to the lids, and our efforts prove fruitless.

ON A CASE OF TETANUS.

By H. Parker Laurence, Esq., Second Belooch Battalion, Hydrabad.

A private of the Fourth Company was, on the morning of the 15th of June, seized with most violent pains of a crampy kind, in both upper and lower extremities. The gastrocnemius and biceps muscles were so sharply attacked as to become curled up into hard round balls. The neck and face were next implicated, the features becoming horribly distorted, the teeth firmly set, and the jaws fixed. Presently the whole of the anterior part of the body was rendered hard and stiff by the frequent muscular paroxysms; the stomach felt like a board; the suffering of the patient became excruciating.

Treatment.—I at once ordered the head to be shaved, and to be covered with a large piece of cloth; with such pieces of cloth I likewise covered the whole of the anterior surface of the body, and kept three attendants constantly employed in trickling cold water over both head and body. After a short time I gave calomel, nine grains, and opium, two grains, and ordered the following draught every half hour—viz., sulphuric ether, one drachm; hyoscyanic tinc-

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ture, thirty minims; camphor mixture, one ounce. Under this treatment the violence of the spasms gradually abated, and after three hours a most profuse perspiration broke out all over the body. The cold water was now withdrawn, and after a little time I gave calomel, eleven grains, and jalap, one scruple, and followed up this with a full dose of castor oil. These medicines produced a most copious evacuation, but of the most abominable kind. I now renewed the cold application, and kept it up till bedtime, when I ordered Dover's powder, ten grains.

June 16th.—Slept well all night; is perfectly free from all pain and spasm. No medicine: to get lime-juice and arrack Evening: Is doing well. Ordered mercury pill, four grains; and in the morning Gregory's powder, one scruple.

19th.—He went on very well, and I discharged him, but in a few days he was brought back, having been seized with a similar attack.

I pursued much the same treatment as before, only I used purgatives more freely, for I do put some faith in this class of medicines, but little or none in opium, as I have invariably found, in all cases of tetanus, that a considerable deal of irritation is referrible to the intestines. In such cases, too, I depend very much on the application of cold as I employ it: it is very different from giving a cold bath, which I think would not be safe. I was unable to discover the cause of the disease in this instance, so I put it down as a case of "idiopathic tetanus."

ON A CASE OF STRANGULATED FEMORAL HERNIA.

By J. W. Perrin, Esq., M.R.C.S. Eng., & L.A.C.

M. C——, aged thirty-six, married, came under my care August 20th, 1851; had been indisposed for more than a week, having suffered from colicky pains and flatulency; had an attack of peritonitis three months ago; has had a femoral hernia on the right side for about three years, irreducible, and for which she has worn a truss with a concave pad. This morning neglected to put the truss on, and soon after evacuating the bowels, was seized with vomiting of green bilious-looking matter; great pain of abdomen, much increased on pressure: tympanitic state of it. On examination the tumour was found about the size of a walnut, tense, and exceedingly painful on pressure; pulse 96; tongue moderately clean. Some blood having been taken from the arm, an attempt was made to reduce the tumour, but was not attended with success: and considering that it had been irreducible from its first occurrence, it was thought advisable not to persevere with such a proceeding. A grain of calomel and the like quantity of opium were ordered to be given immediately, and an effervescing draught, with hydrocyanic acid, every three hours. Three hours afterwards the vomiting continued, and seemed increasing in severity. Opium and calomel to be repeated, and an enema of castor oil and oil of turpentine, with a pint of gruel, to be administered. This was retained for several hours, then came away without being mixed with feculent matter. In the evening the vomiting was more severe than before; the pain of abdomen had increased: leeches were ordered to be applied, afterwards a linseed meal poultice, and to continue the effervescing mixture: the calomel and opium to be repeated every three hours; the long tube of the stomach-pump was passed a considerable way up the bowel, and about two pints of warm gruel injected: this was retained several hours, then came away quite clear.

August 21st.—The vomiting continued about the same as to its frequency, but the matter vomited is much greater in quantity; pain on pressure less, but paroxysms of colicky pains of a most severe character occur very frequently; abdomen exceedingly tympanitic; pulse, increasing in frequency, 104; tongue clean; an enema of warm water to the amount of two quarts was injected without effect. Ordered one drop of croton oil every two hours.

22nd.—Three doses of the croton oil were taken, all of which were immediately rejected; pulse 120; abdomen more tympanitic than before, but not very painful on pressure. There is now no pain in the hernia when pressed upon; the vomiting is now almost incessant, and the matter vomited is of a decidedly feculent character; patient complains of a sense of heat and burning in the throat, and a feeling as if the abdomen would burst from distension; frequent gaping, and great restlessness. As the symptoms now indicated that an actual strangulation had taken place, an operation was proposed, and acceded to by the patient and her friends.

The patient being placed on a firm table, an incision about two inches and a half long was made over the tumour from above Poupart's ligament downwards to the base of it. The coverings, which were much condensed, were carefully divided, and the sac laid open. A small quantity of dark-coloured serum then escaped, and a knuckle of intestine, of a chocolate colour, presented itself, tense from its distension with flatus. The stricture was exceedingly tight, and after some difficulty the director was passed up between the intestine and the neck of the sac, and the stricture divided. The intestine then collapsed, but could not be completely returned. As the stricture appeared to be freed, it was thought advisable not to interfere further with it; the wound was brought together by three sutures, and a pledget of wet lint applied. Two grains of opium were ordered to be given immediately; wine-and-water occasionally. After the operation the vomiting ceased, and the pulse sank down to 88.

23rd.—The report is: Passed a good night, but the pulse is somewhat quicker than it was last evening; the bowels have not acted. To have beef-tea occasionally. Still troubled with eructations and cardialgia: the wound looks well. To continue the cold-water dressing.

24th.—Complains of nausea and a feeling of fulness of the abdomen, which is very tympanitic; spasms of the abdominal muscles; umbilicus retracted; pulse about 90. Ordered, an effervescing draught, with hydrocyanic acid and tincture of opium, every four hours. A liniment, composed of one drachm of croton oil and two drachms of olive oil, to be rubbed in the abdomen; and an enema of salts and infusion of senna, in a pint of gruel, to be thrown up the rectum.

25th.—The injection was retained during the whole of the night, and came away this morning, mixed and followed by feculent matter; abdomen now soft and natural; pulse 100; tongue clean. To have sherry-and-water occasionally.

27th.—Pain in the abdomen again returning, with a feeling of nausea, but no sickness; the bowels have not acted since the 26th.

28th.—Vomiting has returned; matter vomited of a decidedly feculent character; complains of griping pain in the abdomen, which is much swollen again, but not painful on pressure; wound going on well; pulse 104.

29th.—About the same; still vomits as before, every three or four hours, each vomiting being preceded by violent pain in the abdomen and a feeling of weight in the epigastrium; refuses to take any more

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medicine, as she says she must die. Sherry-and-water, with arrow-root and beef-tea, were ordered.

The patient went on in this way up to Sept. 1, the vomiting continuing, and there being no action of the bowels. On this day, about a quart of tepid gruel was thrown up the rectum, which was retained about ten minutes, and then discharged, mixed with some shreds of fæces, very trifling however in quantity; some flatus was also passed. Mr. Cock saw the patient in consultation with me in the evening. Sherry-and-water and ice to be taken frequently, and a grain of opium and half a grain of calomel every three hours.

Sept. 2nd.—Pulse 100; bowels have not acted; nausea, but no sickness; abdomen very tense and drum-like. Somewhat under the influence of the opium; pills to be given less frequently.

3rd.—No sickness, but a feeling of excessive nausea; cardialgia; weight and oppression in the epigastrium; pulse 104.

4th.—Bowels acted three times this morning, and four times more in the course of the day. The sickness, pain and tympanitis have subsided; pulse 104; to omit the pills; wound nearly cicatrized. Without going on with the daily reports, it may suffice to say that the patient went on well, suffering colicky pains occasionally after taking food, but is now quite recovered.

Remarks.—The case is certainly one of great interest. The time which elapsed between the operation and the proper action of the bowels is worthy of notice (about fifteen days), for it may perhaps be well doubted whether the fæcal matter, which was mixed with the injection administered on the 24th, came from above the strictured part of the intestine. What, then, caused the persistence of these symptoms after the operation? Was it that intestine still remained strangulated at the neck of the sac? The termination of the case shows that this was not the cause; most likely it was dependent upon the injured intestine being left in a debilitated or weakened condition, so that for a time its peristaltic action ceased in that part; or from its being bound down by adhesions, and thus presenting an obstruction to the passage of its contents, which time eventually surmounted, the bowel being kept quiet. Most likely the former condition was the cause; for if the latter had existed, it is not probable that it would have been got over. Had strong purgatives been perseveringly administered, I have no doubt that either the vomiting would have increased, and death taken place by exhaustion, or the intestine would have given way, allowing effusion of its contents into the peritonæum, so causing inflammation and death; or an artificial anus might have been formed in the event of the effused matters finding their way to the external wound.

"A THORN IN THE FLESH."

By John Richard Wardell, M.D.

It is not very usual for medical men to be the historians of their own cases. At the suggestion of several professional friends, I now briefly narrate the particulars of a long and tedious illness, the progress and results of which may probably be read with some degree of interest, and the case considered as one of uncommon occurrence.

In May, 1850, I began to experience an aching pain at the lower part of the thigh, about a couple of inches above the inner condyle. Being at that time more than ordinarily busy in the discharge of professional duties, and consequently having an unusual degree of exercise, I attributed the pain spoken of to some twist or strain I might have sustained, but which had been little regarded at the time, and afterwards forgotten, or to the simple effects of too much walking. A few days' rest, and riding to all my professional visits, gave relief, and I then thought little more of my lameness. Active exertion, however, soon re-induced it, and on examination I felt an induration, about the size of the little finger, lying as if in the sulcus between the vastus internus and the gracilis. Over this the skin was discoloured with a slight diffused blush, and on pressure being made by the finger the redness speedily returned.

Being one day at Mr. Benjamin Phillips', I mentioned the circumstance of my lameness, and after showing the place to that gentleman, he recommended the application of iodine. This remedy, however, did not afford relief, and I every week became lamer. It may here be mentioned that at the time Mr. Phillips examined the part there was a good deal of boggy swelling about the knee, more especially at the inner aspect. Mr. Phillips particularly asked if I had sustained any injury there at any previous time, as the case seemed somewhat anomalous, and perhaps the history of a former accident or affection might throw more light on the diagnosis. My reply was according to the present statement:—In the latter part of October, 1845, when leaping a hedge, my horse fell upon it, and although not unseated, I was aware I had sustained an injury above the right knee. On dismounting I could walk, yet still I was conscious that, from the feeling at the time, something had given way. After riding home, which was some few miles, I was so lame I could scarcely dismount. My friend Mr. Cole (Pickering, Yorkshire) examined the part, and it was the opinion of that gentleman that there was laceration of one or more of the muscles; and this opinion proved correct, as even now there is a nodulated thickening felt crossing the course of the rectus, and especially when the limb is flexed. There was no external injury, with the exception of two or three slight scratches. Leeches, fomentations, afterwards cold lotions, and rest, reduced the swelling and subdued the pain. In the course of two or three weeks I could walk about pretty comfortably. From that time to May, 1850, I never wore a bandage, nor paid any particular attention to the seat of my former lameness. I ought, however, to state that after any severe exertion there would, on the following morning, be some trifling tenderness, accompanied with a little swelling. But these passed away without attention or concern. Having had acute rheumatism, I referred the occasional weak feeling above the knee to that cause, or merely to neuralgic pain consequent upon an old injury.

In June I became worse, and my professional duties were performed with more inconvenience. I called on Sir Benjamin Brodie and had his opinion. At that time the pain was strictly localized, but there was still some degree of boggy swelling; the skin was pale and cool. Sir Benjamin recommended bandaging with vulcanized adhesive strapping, to encircle the lower part of the limb. This plan, on being pursued, was evidently unsuited to my case, as the heat, pain, and swelling increased. When Sir Benjamin saw me again, he ordered the entire removal of the elastic bandages, and the immediate application of a dozen leeches, to be followed up with fomentations, and afterwards cold lotions and a general antiphlogistic regimen. I remained for several days in bed, and for two or three weeks gave entire rest to the limb. This mode of procedure afforded considerable relief, and I thought I might now venture to resume my duties. No sooner did I stir about than the described symptoms returned. I then had pain from the ankle to the groin, and Sir Benjamin assured me

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that the saphena vein was cordy and inflamed along its whole course, and to such condition of this vessel that gentleman attributed the swelling above the knee: he conceived the tumid bogginess to result from partial or total occlusion of the vessel at that part of its course. Leeches, antiphlogistic measures and rest were again employed, and, as on other occasions, with benefit. Several of my medical friends called to see me, but unfortunately for the cure, all their opinions varied. Not being fully convinced—so far as medical opinions are concerned—that in a multitude of counsellors there is wisdom, I resolved to place myself under the care of one gentleman, to obey his injunctions rigidly, and abide by the result. Consequently I called on Mr. Travers, whose European reputation and long practical experience were a guarantee for whatever he suggested. Mr. Travers said he had known cases of an analogous nature, where inflammation of the muscles had been produced at that part, in sportsmen and others who were accustomed to be many hours on horseback; and he instanced two cases, where, from pressure against the saddle, not only inflammation, but suppuration, had been the consequence. He conceived that, from a sudden twist, there might have been a slight laceration, and finally a small secretion of matter, in the deep muscles. The swelling and pain having abated, Mr. Travers advised a mercurial plaster and moderately-applied bandaging. In the latter end of August I was so far improved that I was enabled to go to Yorkshire for change of air, and I remained three weeks. On my return my health was quite restored, yet still the induration spoken of, and the pain in walking, were not removed. I was, however, enabled to drive out amongst my patients, and I hoped the affection would at length, with care, wear off.

In the middle of October I was suddenly summoned to a lady in a fit. Her house was only two or three hundred yards from my own residence, but in the hurry I had, I felt, done mischief to the peccant part. On the following morning it was fully evident, both from increased sensibility and ocular inspection, that my troubles were about to return. I could not walk a hundred yards without pain. Mr. Travers now recommended blisters, which were re-applied to the third repetition. I desisted from all exertion, and sought once more, if possible, to be rid of so troublesome an affection. All the remedies which now, during four months, had been tried, had, it was too evident, been tried in vain; and on the 10th of November I found myself again in bed, not one whit better than I had been in July. On the 18th of November Mr. Travers again examined me, and very correctly observed, that as all the ordinary means had been adopted which an affection like the one under consideration appeared to demand, the only alternative remaining was to cut down and see that which was difficult otherwise to understand. To this proposition I cheerfully agreed. The 22nd was proposed as the day for operation, and until that time I was to keep it constantly poulticed. Mr. Travers, Mr. Benjamin Travers and Dr. Samuel Edwards met for the purpose of making an incision into the part. Mr. Benjamin Travers cut down from an inch and a half to two inches, and then carefully dissected the deeper strata of muscles. On scratching open with the point of the scalpel an evidently distended bursa, a couple of drachms of slate-pencil-coloured fluid welled from below. It was the opinion of the gentlemen present that this fluid, by being bound down by the deep fascia, would be sufficient to give rise to irritation of the periosteal covering of the femur, and inflame the adjacent white textures. On noticing the deep muscular tissue, it looked dark and congested, of a dirtyish red colour, evidencing the hue observed in chronic myolitis. The orifice was kept patulus by means of lint and poultices constantly applied. After the operation the pain was somewhat less, but by the 6th of December the whole of the fascia data of the thigh was inflamed. The wound now not looking so healthy as could be wished, Mr. Travers applied the caustic pretty freely; and as the pulse was soft and inclined to be quick, he prescribed quinine, a generous diet, and two or three glasses of port wine daily. After this, a teasing cough came on; I had also copious night sweats, and considerable debility was apparent. The pulse was soft and now (December 15th) 120. The pain in the limb after this increased; the discharge was very considerable, the appetite impaired, and it was with difficulty that I could get out of bed without assistance. Dr. Edwards examined my chest, but the physical signs were not such as to give rise to any great anxiety. There was some degree of hypervesicular murmur, but as the percussion and other conditions were unaltered, Dr. Edwards attached little importance to increased respiratory murmur. The emaciation and general excitability were sufficient to account for it. After this (December 22nd) the mere exertion of coming down stairs to lie on the sofa was attended with such difficulty as to well-nigh produce syncope. The cough continued incessantly; the night-sweats were as before, and the pulse ranged from 115 to 120. I now remained entirely in bed.

Mr. Travers had become anxious as to the result. The whole of the inner condyle was so tender as to render the slightest touch painful, and every day rendered the emaciation more obvious. In that true spirit of kindness and interested concern which Mr. Travers had manifested from the first of his assiduous attention, he strenuously advised the total relinquishment of my practice, and recommended quiet lodgings at Brighton. With reluctance I consented to this proposition, and as soon as circumstances would permit, made my arrangements for departure, in the hope that change of air would do more than physic. When my servant was dressing the wound on the morning of the 8th of January, 1851, he observed a small dark point, emerging—not from the orifice of the wound, but several lines to one side of it—through the healthy skin. When he had drawn my attention to it, I placed my finger upon it, and was surprised to find a sharp hard body. I desired him to reach a pair of forceps, and to my utter astonishment I withdrew a huge piece of hard black-thorn, measuring exactly an inch and a half long.

The bark had been absorbed, but in other respects the ligneous structure was unaltered. It soon occurred to me that it must have penetrated the thigh in October, 1845, when my horse fell in leaping the hedge, as I cannot call to remembrance any other time when such an accident could have occurred. Two days afterwards I went to Brighton, and as the cause was now removed I felt pretty confident my recovery would not be slow. Such, however, was not so much the case as I had anticipated. From long suffering, sleepless nights, and general emaciation, the system had received a shock not so easily shaken off. During the first two or three weeks at Brighton it was with difficulty I could dress myself. But the cough and night-sweats ceased in three days after my arrival. The languor and debility were more persistent. At the expiration of five weeks the orifice closed, and my recovery was now rapid. From Brighton I went to Yorkshire for a few weeks, and in a short time became in better health than I had been for years.

This case presents a good illustration of the ill effects which may, in other parts of the system, and as

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we have seen, in a vital organ, be set up from an irritative cause in a distant part. A foreign body in one of the least sensible of tissues (the deep muscular) gave rise to exaltation of sensibility in the surrounding parts, created persistent cough, night sweats, and a pulse as high as in typhus fever. Authors have long said that irritation is a morbid condition not strictly to be defined. But if we cannot systematize and thoroughly explain its essential nature, we can well understand the serious maladies of which it may be the source. We have seen that a constant fret on the nervous system may be extended to the lungs and the circulation—that it may indeed implicate, first by increase of function, each of the vital organs properly so called. When the foreign body had been extracted, three days sufficed to allay a cough and other unwelcome symptoms of weeks' standing. Had the operation not been performed, and the caustic freely applied, it is highly probable that the body would not have been expelled until it had made such inroads on the general health as to endanger ultimate recovery.

SPONTANEOUS CURE OF OVARIAN TUMOURS BY THE DISCHARGE OF THEIR CONTENTS THROUGH THE FALLOPIAN TUBES.

By James Robertson, M.D., F.R.C.S. Eng.,
PHYSICIAN TO THE INFIRMARY, HITCHIN.

The remarks on Drs. Cartwright and Warren Stone's catheterism of the Fallopian tubes in ovarian dropsy (in The Lancet) called to mind a case which occurred to me a few years since, of which I took notes at the time, and afterwards was enabled to add the post-mortem appearances. I think it very interesting, as showing the same disease in both ovaries in course of cure spontaneously.

Mrs. ——, a delicate, strumous, married young woman, consulted me in June, 1847, regarding her enlarged abdomen. She said that now her abdomen had enlarged gradually for some months, but more rapidly within the last two months; it was as large as, and of similar appearance to, that of a pregnant woman at her full time. She had menstruated regularly; did not think she had ever been pregnant; passed but a small quantity of milky-looking urine. A fluctuating tumour filled the pelvis, pressing on the rectum and vagina; the uterus was distinguishable, high up, but small. A catheter was passed: the bladder was empty. She told me she had a similar swelling about a year before this time, which ended by an immense discharge from the vagina. She attributed this first attack to over-exertion in walking; her health had been very delicate for some years. She suffered much from dysmenorrhœa. A few days after this, whilst in bed, suddenly a great discharge of most abominably stinking, white, slimy fluid, with a quantity of white and greenish flakes and pieces of bladder-like substance floating in it, enough to fill two full-sized chamber-pots, took place per vaginam. The abdomen resumed its natural size: the discharge in four months diminished to a mere weeping. She now had symptoms of phthisis, and died in September, 1848.

On making examination after death, we found old adhesions plentiful about the lower abdominal and pelvic regions, attaching the various viscera together. In the right ovary was a cyst as large as a medium-sized orange, with a very ragged interior, containing some fluid like that discharged; it was much corrugated and collapsed, and communicated with the Fallopian tube, on which were two other cysts of the same appearance as the other, but about one-fourth the size; there was also one cyst unruptured, as big as a small orange, filled with glairy fluid, in the same ovary. In the left ovary was a cyst of precisely the same appearance as that first described, but empty, communicating with the left Fallopian tube. The Fallopian tubes were dilated; the uterus was sound, but harder than usual throughout.

The following is somewhat similar, but not so complete:—

Mrs. G——, a cachectic, strumous, married woman, aged thirty-six, not having been pregnant, and who menstruated regularly, observed, about sixteen years ago, (this was in December, 1848,) a fulness in the right iliac region, which had since gradually become greater, and which, on examination, presented the usual signs of an ovarian tumour, she being at this time as big as if seven months gone with child. In February, 1849, she found herself one morning, on waking, in a pool of "blood and matter" up to her shoulders, which had escaped per vaginam. A considerable discharge continued for some time, but in six months had nearly ceased, her general health had improved, and the abdomen resumed its natural size. She is now (September 1851) in pretty good health, and the contents of the pelvis appear healthy.

ON A NEW AND SIMPLE METHOD FOR THE CURE OF FISTULA.

By H. B. Evans, Esq., M.R.C.S. &c.

The frequent occurrence of fistula, and the often unfortunate and unsatisfactory results of an operation intended for its cure, induce me to make known to the profession, through the medium of The Lancet, a simple plan of treatment, which has proved eminently successful in two cases under my care.

In October, 1850, W. E——, box-maker, aged forty-two, applied to me with an abscess in the neighbourhood of the rectum, pointing externally, which was opened, and gave exit to a large quantity of pus. This gradually degenerated into a deep fistulous tract along the rectum, and communicating with it at its extremity. For two months the usual remedies were adopted without success, and I then expressed my opinion that an operation must be resorted to. In this I was fully borne out by the opinion of an eminent hospital surgeon whom I called in. This the patient obstinately refused to submit to, and such refusal led to my adopting the mode of treatment I am about to detail.

A blunt-pointed silver probe, five inches in length, (the sinus itself being four inches in depth,) was inserted into the wound, having previously been dipped in dilute nitric acid, (one part of acid to one part of water,) and suffered to remain there a minute. That this had a strong cauterizing effect, I knew from the pain it occasioned. Thus far the result was desirable; but in consequence of the destruction of the silver probes by the acid, and the impossibility of using them more than three or four times, I had some copper ones made, and used them in the same manner, only us substituting a nitrate of copper for a nitrate of silver, and I think with a better effect. Under this treatment I was pleased to see the depth of the sinus daily decrease by the gradual filling of it up with healthy granulations from the bottom. This was continued nearly every day for two months—February 22nd, 1851, being the last occasion on which I thought it necessary to apply the nitrate of copper. The patient is at the present time perfectly sound.

In March, 1851, W. H——, aged thirty, applied to me with strumous disease of the testicle. Iodine and iron were given, which arrested the progress of the disease, and produced a corresponding improvement in his health. The outward form of the testicle was

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retained, but with an open sinus of an inch and a half in length in an oblique direction from the apex, and discharging a thin white glairy fluid, peculiar to fistulæ. The same treatment was pursued as in the former case, the sinus becoming entirely filled up, and the patient discharged at the commencement of September, without any external marks of previous disease, beyond a slight irregularity on the surface and a small cicatrix.

Thus by an easy method may the most strumous fistulæ be traced to their extremities, and a strong caustic power applied to the bottom of the wound, from whence it is so desirable granulations should arise.

A limited sphere of private practice enables me only to give these two cases; but I have no hesitation in saying, that if this system be approved of and practised by surgeons generally, they would have as much reason to be satisfied with it as myself and patients, and the use of the knife would become almost obsolete. When a silver and copper wire are introduced together, after having been dipped in the acid, the caustic effect is intense, (likened by the patient to a red-hot wire,) and if allowed to remain too long, would destroy the tissues with which they were in contact. This, I apprehend, is the effect of the galvanic action set up by the contact of the copper and silver wire with the acid acting upon them.

Before concluding, I will just observe that the treatment in the first case was put into practice some time before the report of the treatment of "Fistula and Hæmorrhoids by Platinum Wire made red hot by Galvanic Battery, by Mr. Marshall, of University College Hospital," published in THE LANCET.

REPORTS OF CASES OF HYDROCELE, WITH RUPTURE OF THE TUNICA VAGINALIS.

By GEORGE YEOMAN HEATH, Esq., Surgeon, Newcastle-on-Tyne.

CASE 1.—Guy W——, aged thirty-five, a lead miner, came to me on May 26, 1850, by desire of my friend Mr. Featherstonhaugh. On the left side of the scrotum was a moderately tense swelling, as large as the fist, tender when handled, and obscurely fluctuating. It occupied the usual position of a hydrocele, and, taken by itself, it had the ordinary form of one. But in front of this was a second swelling, about the size of a pigeon's egg, and of similar shape, the large end towards the larger tumour, the apex projecting forwards; it was softer than the larger swelling, and distinctly fluctuating. Both swellings were transparent, the anterior smaller one particularly so, and its coverings appeared much thinner than those of the posterior. By careful examination fluctuation was found to pass from one swelling to the other. The cord and the inguinal apertures were healthy.

The patient gave the following history: He first observed an enlargement in his scrotum three months previously; it was then very small, and more painful when handled than at present. He did not remember to have received any injury to the part, but believed it might have been hurt by the low wooden stool on which he sits while at work. The enlargement gradually increased, until a month previously, when it had acquired the size of the posterior swelling at present. At that time he met with a fall, and on examining the part subsequently, the enlargement was found much increased, but softer and discoloured. The discoloration and soft swelling gradually disappeared, leaving behind a tense swelling, not bigger than a hen's egg, and of uniform shape. This increased in size pretty rapidly, and began to assume the form it bore when he came to me.

Notwithstanding the peculiar form of this enlargement, its transparency and fluctuation, together with the history of its origin, left no doubt as to its nature; it was evidently a collection of fluid, contained in part at least within the tunica vaginalis.

On the 29th, Mr. Featherstonhaugh introduced a trocar, and drew off about six ounces of clear, straw-coloured liquid, both swellings being emptied by the same opening. No injection was used at this time, the man not wishing to lose his work by being laid up.

On the 4th of July this patient was admitted into the infirmary of this town under my brother. The sacs had refilled, and the enlargement presented the same appearance as above described.

On July 9th it was tapped, and equal parts of tincture of iodine and water were injected. Considerable inflammation ensued, accompanied by an effusion of lymph of some solidity.

After a few days, however, the hardness disappeared, and the part was left in much the same condition as at first, but the swelling was less tense. From this flaccidity of the enlargement, the relation of its two parts was more easily examined. The covering of the anterior prominent portion was evidently much thinner than that of the posterior swelling. They communicated by an irregular circular opening, into which the point of the forefinger could be pushed. On examination with a lamp, the whole was seen to be transparent, and at the point of connexion between the two sacs, a darkish ring could be made out, behind which the transparency of the posterior sac was less distinct.

On the 30th the hydrocele was again tapped, and equal parts of port wine and water were injected.

On the 31st there was much swelling and inflammation, and some constitutional disturbance.

On the 6th of August, the anterior swelling being still distinctly fluctuating, and the skin covering it red, it was punctured, and a tablespoonful of pus evacuated. The posterior swelling was solid and consistent, and by pressure on it no pus could be made to flow from the opening.

On the 8th a slough presented at the puncture which had been made on the 6th. The opening was enlarged, and a whitish slough, apparently the remains of a small sac, removed. The posterior swelling, diminished in size, continued firm and consistent.

By the 15th there was no appearance of any anterior swelling, and the opening made was healed up. Some hardness remained in the site of the posterior swelling.

On the 21st the patient left the infirmary: there was still some thickening about the posterior sac, but no appearance of any re-accumulation of fluid.

Remarks.—From the history of the case, and from the physical signs presented by the part at different periods, it seems most probable that the course of the complaint and the nature of the anterior swelling were as follow: In the beginning there would seem to have been an ordinary hydrocele; by the fall which happened when this reached some size, the tunica vaginalis was lacerated, its contents being effused into the cellular tissue of the scrotum beneath the dartos; by degrees the effused liquid and extravasated blood were absorbed, but the hydrocele was not removed, nor the laceration in the tunica vaginalis healed. As the tunica vaginalis became again distended by the re-accumulation of the fluid, this would at last reach the laceration in the upper and anterior part of the sac, pass through gradually, and in small quantities at a time, and thus, by its irritation, give

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rise to the formation of a cyst in the cellular tissue communicating with the tunica vaginalis. The thinness of the covering over the anterior swelling, its softness and extreme transparency, and the distinct ring-like communication between the two sacs, all seem to point to this explanation of the appearances, whilst there is sufficient evidence of the rupture of the tunica vaginalis in the history of the case.

If anything were wanting to confirm this view, it would be found in the very striking circumstance of a different action being simultaneously excited in the two sacs, by the inflammation consequent upon the port-wine injection; an effusion of lymph taking place from the serous tunica vaginalis, and pus being formed in the sac derived from the cellular tissue; each part behaving according to its peculiar nature, although forming part of what, before the injection, might be considered a single cavity.

After the effusion of lymph into the tunica vaginalis, the communication between the two sacs would be blocked up, and the inflammation in each membrane left to pursue its natural course. The ultimate death of the cyst and separation in the form of slough, illustrates the inferior vitality of these supplementary structures as they may be termed.

The absence of suppuration after the injection by iodine may be accounted for by the fact, that the quantity of fluid used was insufficient to distend the tunica vaginalis, and to reach the opening into the cyst.

From what I have noticed in consulting various surgical works upon this subject, it would seem that rupture of the tunica vaginalis, in cases of hydrocele, has not attracted much notice. That such an event may happen, is for the most part recognised, but very cursorily or indirectly, and sometimes not at all. I have not met with any detailed account of the symptoms to be expected upon such an incident, and as its sudden occurrence would certainly be a source of alarm to a patient, and might be a cause of perplexity to a surgeon, the subjoined case may not be uninteresting; it illustrates also the case already related.

Case 2.—Whilst resident, some time ago, as house surgeon in University College Hospital, I was sent for suddenly to see a relative, living a little distance out of London, supposed to be suffering from rupture. On arriving at the gentleman's house, I found him in bed, and in some alarm at the state of the scrotum, which was much enlarged and slightly discoloured. The swelling was distinctly fluctuating, loose and flabby; the scrotum, indeed, except in colour, resembled nothing so much as a bladder partially filled with water; there was very little œdema, such as is seen in dropsy. The skin was discoloured in points here and there from extravasation of blood. There was little or no pain, and the part could be handled freely. The testicles on both sides could be distinctly felt; the cord on each side was free. The fluid was chiefly on the left side, but was not confined to it. The account given to me by the patient was to this effect:—

For some months the testicle on the left side had been, as he supposed, enlarged; but as no particular inconvenience was experienced, he had not thought it necessary to take any steps with regard to it. On the evening previous to my being sent for, on taking his seat in a carriage, he crossed one leg over the other, and as he did so, became at the same time aware that the enlarged part was caught between the thighs, and felt a sharp pain. On reaching home, it was found that an alteration had taken place in the size and appearance of the pre-existing tumour. In the morning the change in the tumour being more completely ascertained, and some discolouration of the skin having also then appeared, he felt alarmed, and sent for me.

There was little difficulty here in coming to a conclusion as to what had happened; the history of the case, the existence during some months of a firm swelling devoid of pain, the sudden change in the form and consistence of this tumour following the application of violence, and lastly, the appearances exhibited when I saw the part, all tended to show that there had been a hydrocele of the tunica vaginalis, which had been ruptured. The only diseases which these signs might possibly have been supposed to denote, were rupture, anasarca of the scrotum, and extravasation of urine. A slight examination sufficed to show the absence of any hernia; the history of the case, and the absence of dropsy in other parts of the body, negatived the idea of anasarca: the fluid, too, did not appear to be in the cells of the cellular tissue, producing considerable œdema as in anasarca, but rather to move freely as in a bag formed by the dartos. There had been no impediment to the passage of the urine which could have led to its extravasation.

The treatment pursued consisted in raising the part upon a little chaff pillow covered with oil-silk, in the application of an evaporating lotion containing carbonate of ammonia, and in the administration of a gentle aperient. The fluid was rapidly absorbed, but the hydrocele was not cured; the rent in the tunica vaginalis healed, but the sac refilled, and was at a subsequent period tapped and injected with a solution of sulphate of zinc, by which a permanent cure was effected. Oddly enough, on the absorption of the effused fluid, another hydrocele became manifest in the tunica vaginalis of the right side, where, as far as my patient had observed, there had been no previous enlargement. This second hydrocele was not cured by injection of a solution of nitrate of zinc of the same strength as that used on the left side. Port wine, afterwards used, also failed. But the collection of fluid formed subsequently to this second injection was very small. It was not interfered with again, and now, after the lapse of five years, it remains in much the same state.

Rupture of Tunica Vaginalis, and change in the contained Fluid.

Case 3.—A few weeks ago I had an opportunity of tapping a hydrocele of the tunica vaginalis, in which a change had taken place in the contained fluid, apparently in consequence of repeated rupture of the tunica vaginalis. The man who was the subject of this hydrocele has been in the habit of coming to me every year, for the last three years, for the purpose of having his hydrocele tapped. When he presented himself last time, I noticed that the swelling was much larger than on any former occasion; he said also that he had suffered more pain in it. The fluid withdrawn was of a dark-brown colour, without any smell, and not unlike what I have seen taken from the antrum. It putrified rapidly, and before there was any opportunity of examining it microscopically. The patient told me that the swelling had burst three times; and on questioning him, I found he meant it had burst internally; no discharge of fluid had taken place externally. It should be observed that this man breeds and kills pigs, and that from examining the testicle in these animals, he was quite aware of the seat of complaint in himself; and it was his idea that the bag of the testicle, as he called it, had burst. It seems probable that this rupture of the tunica vaginalis was connected with the change in the nature of the contained fluid. Possibly it might have been found, under the microscope, to contain blood-globules.

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REPORT OF A CASE OF SEVERE GUN-SHOT WOUND IN THE CERVICAL REGION.

By S. T. Chadwick, M.D., Edin., M.R.C.S. Eng., &c.

Some time ago the following accident occurred to John O——, a youth about seventeen years of age, which, at the time, had every appearance that a fatal result would be the consequence; nevertheless, after considerable suffering, it terminated favourably.

After the boy's recovery, I lost sight of him for a considerable period; however, a few weeks ago, I met with him, and he informed me that since his recovery he had continued in perfect health and strength.

I preserved some notes of the case, and I now forward you its history, if you should consider it sufficiently interesting to occupy a space in your influential and extensively read journal.

I was summoned one afternoon in great haste, under the following circumstances:—It appears that the youth had procured what is known by the name of an Italian iron, the cylindrical part of which measured six inches in length, one inch in diameter; this he had secured to a block of wood by means of two staples, and cut a small aperture near the closed or convex end for a touch-hole; this he considered to be a tolerably good representation of a cannon; he put in it a considerable quantity of gunpowder, together with some pieces of lead; he then placed it on a step at the doorway, intending to fire it towards a garden which was immediately opposite. On applying an ignited substance, a loud report was produced, and he was struck down on the floor with great violence.

When I saw him, he was supported on a chair by two or three persons, presenting a wound at the lower part of the neck, from which some blood was flowing over the chest; difficulty of deglutition, and the respiration very much impeded. He was faint, covered with a cold, clammy perspiration, and the pulse at the wrist scarcely discernible.

On introducing a finger into the wound, I could distinctly feel the foreign body, which, however, was not observable externally. It had entered on the left side of the neck, immediately above the sterno-clavicular articulation, between the two origins of the sterno-cleido muscle, and at the back part of the neck, immediately adjoining the transverse process of the last cervical vertebræ; the integument protruded as if bulged out by some hard foreign body; the skin nevertheless remained intact.

By the means of a strong pair of forceps, and with comparatively little difficulty, the tubular body was removed; immediately after which he breathed more freely, and could swallow with greater ease.

On its extraction, nor subsequently, there was scarcely any hæmorrhage—indeed, not more than two or three drachms—proving incontestably that none of the important vessels had received material injury.

He was immediately got to bed, and placed in an inclined position, and in consequence of the faintness, some brandy and compound spirit of ammonia were administered. The same evening he had a pill, containing two grains of calomel and one of opium, and six drachms of castor oil the following morning.

On visiting him the following day, I found that he had passed a tolerable night, and very little febrile disturbance was evident. I ordered him a slop diet, and to be kept absolutely quiet, and should any pain be experienced, to repeat the pill at bedtime.

On the third day of the accident, his condition was far less favourable; he complained of considerable pain about the neck and throat, which extended along the back and chest; sensation and motion of the left arm were impaired; there was some swelling and diffusive inflammation around the wound, the opening of which had now become considerably increased in size, and presented a sloughy aspect, a thin, fœtid, and bloody discharge escaping; great thirst; loathing of food; hot skin; quick and strong pulse: in short, there were present all the symptoms of a smart attack of inflammatory fever. He was bled to twelve ounces, and a saline mixture, with pills of calomel, tartar-emetic, and hyoscyamus, were prescribed. Fomentations of poppy-heads and chamomile flowers, with bread and linseed meal poultices, were now substituted, instead of dressings of simple cerate and an evaporating lotion, which had been applied from the time of the casualty.

I will not weary you with a daily report of the progress of the case; suffice it to say, that for three or four following weeks, he continued in a very precarious condition, an irritative form of fever early supervened, and from the profuse discharge and sloughing state of the wound, an early necessity of support became indispensable, such as beef-tea, wine, quinine, and opium.

About the tenth day, the integuments near the spine began to inflame, followed by an abscess which opened externally; consequently a sinus or complete opening through the neck was produced; at the fifth week, a portion of a neckcloth which he wore at the time of the explosion came away.

Several months elapsed before the wounds entirely closed, previous to which two or three small portions of bone were discharged, which I believed to be from the transverse process of the vertebræ.

During the reparation of the injury the natural sensibility of the arm was gradually restored, and although the limb continued weak for a considerable period, he has now perfect command of it; and at the present time a large depressed form of scar exists at the front part of the neck, but the one near the spine is almost imperceptible.

Considering the locality, and the serious and formidable nature of the injury, it is certainly surprising that the important vessels and nerves should have escaped.

UTERINE HÆMORRHAGE ARRESTED BY THE INJECTION OF COLD WATER.

By Walter Chapman, Esq., Surgeon, Lower Tooting.

In November last I attended, for the first time, Mrs. ——, a parish patient, in her sixth confinement, at the full period of gestation. The patient (who resided near my house) is a small, weak, very delicate woman, and had during her pregnancy been subjected to great privations and distress. She informs me that she "flooded" after her last labour. On this occasion the labour itself was quite natural. After the removal of the placenta there was some little hæmorrhage, which induced me to remain with her a considerable time, and to apply very firmly the abdominal pad, &c., and adopt the ordinary means in such cases. I left her going on well. On visiting her again in about an hour, I found her lying as she had been left, but looking so pale and depressed, that I felt sure either external or internal hæmorrhage had occurred. On examination there was very little external loss of blood, but the uterus had enlarged very considerably from internal hæmorrhage. I therefore introduced my left hand into the uterus, which was filled with coagulated blood, pressed my fingers through the coagula, and titillated the internal surface of the womb, at the same time making the firmest pressure I could with my right hand externally over the uterus; but this proceeding had no effect on the womb;

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it did not make the slightest contractile effort. I now immediately sent for a common injecting pint syringe, and (retaining my hand in the uterus) had it filled with the coldest water that could be procured, and directing the pipe with my right hand into the uterus (with the help of an assistant,) had the water injected. Not till after this had been repeated two or three times did the uterus make any decided contraction, I suppose in consequence of the water not coming in free contact with the internal surface of the organ; but presently it did contract, and on partly withdrawing my hand, a large quantity of coagula was expelled. Still the uterus relaxed again immediately; more water was therefore injected, and after some seven or eight syringefuls had been used—the hand being still kept in, and the pressure or grasping of the uterus by the right hand being continued, its contraction after the expiration of an hour, or perhaps more, became perfect and permanent.

Remarks.—This is the first case that has come under my care (and I hope it may be the last) in which the uterus has failed to recognise and respond to the stimulus of the hand within its cavity; but so it was in this instance, the organ exactly resembling (as Dr. Tyler Smith has described it) "a washed leather bag." This woman, with the exception of debility, recovered perfectly in the course of ten days or a fortnight without a single unfavourable symptom; and I attribute her well doing principally to the injection of the cold water, giving, of course, the other means their proper share of credit. Should a similar case again present itself, I should not hesitate to adopt the same remedy. On this subject Dr. Blundell says: "But should the bleeding become obstinate, so as to place the life of the patient in danger, you would then be justified in throwing astringent fluids into the uterus, a drachm of alum, for example, being dissolved in a quart of water." Dr. Ramsbotham remarked: "I have seen some cases of dangerous hæmorrhage after delivery that had resisted *all* other means, cease, on a quantity of cold water to the amount of two or three pints being pumped into the uterus." The late Mr. Ingleby, of Birmingham, stated: "But in extreme cases, where the uterus has been bulky and flaccid, I have known an active contraction ensue from the injection of very cold water, when the presence *of the hand has failed to produce it*. Gooch used to observe, 'I am never happy when attending a labour, unless I carry my elastic bottle with me.'"

I consider this case of importance, as augmenting the number of those which have appeared in THE LANCET, showing the value of the injection of cold water in uterine hæmorrhage, without any unfavourable after-symptom from its employment.

ON THE

APPLICATION OF NITRATE OF SILVER TO THE LARYNX, IN DISEASES OF THE AIR-PASSAGES AND IN HOOPING-COUGH.

BY EBEN WATSON, M.D., Glasgow.

THE subject of the topical application of a solution of nitrate of silver to the larynx, has been daily attracting more and more of the attention of medical men since the publication of Dr. Horace Green's first work on "Diseases of the Air-passages." The practice hitherto has been chiefly restricted to certain cases of chronic laryngeal disease, but Dr. Green has recommended an extension of it to cases of croup, and by a favourable review of his little work on that subject, the Editor of THE LANCET has lent his powerful aid in inducing practitioners throughout this country to make trial of the remedy in these formidable cases.

I write these remarks to suggest to the numerous readers of THE LANCET another extension of this same remedy—viz., to cases of hooping-cough; a disease which, if not equally fatal with croup, when considered in proportion to the number of attacks, causes, I believe, a much greater number of deaths, and is, if possible, even less under medical control. I think that one great cause of the want of success hitherto experienced in the treatment of hooping-cough, has resulted from unsound ideas regarding its seat. It is very generally treated with emetics and expectorants, with embrocations over the chest, or perhaps with leeches, as if it were some inflammatory *pectoral* affection. No wonder that with such treatment the disease generally runs its course, and either wears out itself or the patient.

I think a much more correct theory of the disease is, that it is the product of a poison which exerts its first influence on the mucous lining of the pharynx and larynx, and on the sentient nerves—viz., branches of the superior laryngeal supplying these parts; that in the next place the inferior laryngeal becomes excited, and partial spasm of the glottis follows. It is a peculiarity of the action of this morbid poison, as of most morbid poisons acting on the nerves, that the symptoms caused by its presence are of a periodic or intermittent character. Hence it is that the disease commences with a periodic cough, differing in many respects from that which accompanies bronchitis; hence arise the pains of the neck generally complained of by the patients, and hence, finally, the hoop, or back-draught, when the tendency to frequent spasms of the glottis has supervened. In like manner the vomiting which generally accompanies the fits of hooping-cough, is caused by an extension of the morbid excitation to the branches of the pneumogastric nerve supplying the stomach.

Such are the symptoms which in my opinion are alone essential to a case of hooping-cough, and which of themselves constitute the disease. But whether this disease be or be not complicated with other affections, it ought to be treated *per se*, and not, as is too often the case, as if it were bronchitis or pneumonia, or some affection of the head or even of the stomach.

Entertaining these views, and being aware of the powerful influence of topical applications of solution of nitrate of silver, in allaying nervous irritability of the glottis, it occurred to me, about eighteen months ago, when hooping-cough was more than usually prevalent in this city and its neighbourhood, to employ that remedy in the disease just named. I therefore gave up all the usual treatment in the cases which I was attending at the time, and contented myself with confining my patients as much as possible to one apartment, well aired and properly heated, attending to the functions of the alimentary canal, and touching the pharynx and larynx every second day with solution of caustic. Pursuing this treatment, I met with very considerable and unwonted success. My first cases, which occurred in summer, ceased to hoop in about ten days or a fortnight after the solution had begun to be applied; and of late, in our worst winter weather, I have treated several cases to a favourable *termination* in from two to six weeks.

In November last, I read to the Glasgow Medical Society a paper,* detailing the results of this treatment, which induced several gentlemen to use the remedy proposed. Most of them report favourably of their success, and I earnestly hope that a more general trial will soon be given to it, and that its true therapeutic value will be speedily recognised.

* London and Edinburgh Monthly Journal of Medical Science, December, 1849.

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Of course, in complicated cases, the benefit arising from this treatment will not at first be so apparent, seeing that it is directed against the proximate cause of the hooping-cough alone. Nevertheless, even in such cases, the subduing of the primary disease is of the greatest importance, and, indeed, is generally the first step towards a complete cure. In complicated cases, then, I should also recommend a steady perseverance with the topical application, while at the same time appropriate means should be used for the cure of the complication, of whatever kind it be. I could easily illustrate these remarks with numerous cases treated by myself or some of my medical friends here, but it would occupy too much valuable space.

The strength of the solution which I generally employ, in cases of hooping-cough, varies from one to two scruples of the nitrate of silver to each ounce of water, and I apply it regularly every day, to the pharynx, glottis, and larynx of the patient. I may remark, too, that for children the sponge ought to be considerably smaller than for adults; and that, every second day, according to my experience, the little operation of introducing it, in the former class of patients, is best performed by the surgeon putting the index-finger of his left hand into the patient's throat, feeling the epiglottis with its tip, and thus guiding his sponge into the rima glottidis.

In conclusion, I wish to draw attention, for one moment, to a statement made towards the end of the review,* which suggested the writing of this article:—

"Dr. Hancock Douglas," says the reviewer, "had in his pocket-case a *tongue spatula*, without the aid of which it would have been difficult to freely expose the *glottis* to view. On placing the spatula on the tongue, that organ is readily brought forward, and the *fissure* can at once be *seen*, and the instrument readily introduced."

I fear there is some mistake in this announcement. Did the reviewer actually use this spatula, and see the glottis, or did he take Dr. Douglas's word for it? Is it possible to obtain a view of the fissure of the glottis by pulling forward the tongue in any manner whatever? Why, in most cases, the glottis is situated about two inches below the root of the tongue; and if you had that organ stretched to its utmost, you must still have the faculty of looking round a corner, and that in the dark, before you could see the glottis! I am in the frequent habit of using a tongue spatula for pulling forward and depressing that organ while introducing the sponge-probang, and it is extraordinary how very seldom I can manage to bring into view even the *tip of the epiglottis*. I have contrived several kinds of mirrors and specula, with which to gain a view of the glottis in the entire larynx of a living person; but all my attempts have been quite in vain. The practical difficulties in the way of accomplishing the desired object were insurmountable, and I gave up the attempt; but I shall be delighted if Dr. Douglas has been more fortunate, and if by so simple and portable an instrument as he refers to we shall be able to see the fissure of the glottis before we introduce the sponge. A more important or acceptable office to the profession cannot be performed, than to describe minutely, and also to depict, this wonderful instrument, modestly termed a "tongue spatula;" but which, if the reviewer's statements regarding it be correct, ought to be dignified with the appellation of *speculum glottidis*.†

* The LANCET, *ante*.

† The writer recommends that a delineation of this instrument should be forwarded for publication in THE LANCET.—ED. L.

ON A CASE OF EXTRAVASATION OF THE URINE.

By T. J. ASHTON, M.R.C.S.E., London.

On July 26, 1851, I was requested to see J. S——, aged twenty-two, a labourer in Covent-Garden Market. He has worked hard, and has always had a sufficiency of food; drank freely of beer during the day; has enjoyed good health till the present attack; had gonorrhœa six years ago, which continued about a fortnight; has never experienced any difficulty in passing his urine, nor has the stream diminished in size.

A few days previous to my seeing him, he had left his work, feeling ill, and was supposed by those about him to be attacked with fever. He sought medical assistance, and complaining of slight pain and a lump situated between the root of the penis and the scrotum on the left side, leeches and fomentations were ordered, and febrifuge medicines prescribed.

On Friday, July 25, the penis was observed to be œdematous. On the following day, when I first saw him, the scrotum was also affected, chiefly the left side. The integument over the pubes and lower part of the abdomen was of a dusky red colour. Pulse very feeble and quick; tongue clean and moist: countenance not anxious; neither has, nor has had, difficulty of micturition. Free incisions were made along the dorsum of the penis on either side the middle line, and on both sides of the scrotum, giving vent to blood and fluid having a strong urinous odour. Poultices to the affected parts. Ordered the following: camphor mixture, one ounce; carbonate of ammonia, five grains; spirit of juniper, three drachms; tincture of opium, eight minims, every four hours. To take one grain of powdered opium at bed-time. To have meat, beer, milk, and bread.

July 27th.—Slept at intervals during the night; tongue furred and moist; skin hot; pulse rather firmer than yesterday; sloughs forming on penis and left side of scrotum.

28th.—Countenance somewhat anxious; pulse rapid and weak; tongue much furred; slept but little last night. The discoloration of the integument over the abdomen not extending. A free incision, between three and four inches in length, made on the left side, a little above and parallel to Poupart's ligament, giving exit to some fœtid pus, and exposing the cellular tissue in a sloughy state.

29th.—Countenance less anxious; pulse stronger; has slept better during the night; free discharge from incisions in groin. Does not eat the meat ordered: to have four pints of beer, four eggs, milk and bread.

30th.—Sloughs of penis and scrotum beginning to separate; pulse 80, tolerably firm. Skin over right groin being undermined, a free opening made.

31st.—Improving; sleeps well; omit the opium at night.

Aug. 1.—Pulse stronger; tongue clean.

2nd.—Sloughs from abdomen removed, the penis and scrotum becoming clean.

3rd.—Progressing favourably. The bowels have acted copiously every second day without the use of purgative medicines.

5th.—Feels comfortable; sleeps tolerably well during the night; tongue clean and moist; the muscles of the abdomen seen through the incisions quite clean, and granulations beginning to be formed.

6th.—Pulse 76, weak; he is desponding this morning for the first time; tongue slightly furred, moist; ulcers left by incisions healthy and discharging a well-formed pus. Expresses a disrelish for the beer; to have two pints instead of four; two eggs, fish for dinner, milk and bread. An eruption on face, hands

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and body, resembling small-pox, but no premonitory symptoms have occurred.

7th.—Depressed appearance; pulse weak; the eruption noticed yesterday manifestly variola; the pustules are thickly scattered over the body and face, but not confluent.

10th.—The eruptive fever pursuing its usual course.

14th.—Erysipelas of abdomen; wounds look unhealthy; great depression; will not take any nourishment.

16th.—Erysipelas left abdomen and extending down the thighs.

19th.—Better; erysipelas not extending; variola progressing favourably.

23rd.—Greatly improved; tongue clean; appetite returning; erysipelas subsided; wounds looking healthy; has a bed-sore over sacrum; to have a water-pillow.

27th.—Much better; has experienced great comfort from the water-pillow; the granulations of the ulcers flabby; to be dressed with zinc lotion.

Sept. 3rd.—Rapidly improving; appetite good; bed-sore nearly well.

15th.—Wounds made in penis and scrotum quite well.

25th.—Ulcers of abdomen nearly cicatrized; he is fast regaining his flesh; passes his urine freely by the urethra.

The form of extravasation in the foregoing case is not of frequent occurrence, and there is a possibility of its true nature not being clearly understood till serious and perhaps fatal mischief has occurred, as happened in a case a short time since, the particulars of which were related to me by a professional friend; it being not till a post-mortem examination revealed the cellular tissue, up to the axillæ, in a state of slough, having a strong urinous odour, and a gangrenous abscess opening into the urethra discovered, that the cause of death was known.

The case of J. S—— might at first sight have been considered one of acute œdema of the scrotum, had not his constitution been sound; and he was also free from fistulæ or ulcers in the neighbourhood of the perinæum; neither had he been exposed to wet and cold, the exciting causes of that disease. The trivial hardness at the root of the penis was the only clue to the origin of the mischief, as it will be observed he never experienced any retention of urine nor the slightest difficulty of micturition. In the treatment, the first object was to make free and deep incisions; afterwards to maintain the vital powers by food and stimulants; and to combat the symptoms, as they occurred, by such medicines as were deemed necessary.

ON A CASE OF BUTTON SCURVY.

By J. W. Edmonds, Esq., Camberwell.

About the 13th of September, 1851, T. G—— applied to me with a circumscribed, strawberry-looking swelling of the palm of the hand, about the size of a small walnut. He was a stout, well-built, active young man. Being not quite clear as to the nature of the disease, I directed him to apply to St. Thomas's Hospital.

On the 20th of September he again applied to me, with the hand and arm greatly swollen, and the tumour looking inclined to increase in every direction. A small spot appeared on the back of the hand, which seemed to threaten a second edition of what was going on in the palm of the hand. Having observed an account of the button scurvy, and my patient being a milkman, his cows being in the same field where sheep were pastured, I determined this as a case of button scurvy; and considering the irritation so great that the more powerful caustics were inadmissible, I applied lead lotion to the hand and arm, supporting them with a sling, and touched the whole of the surface of the tumour with tincture of the sesquichloride of iron twice daily. The hand, arm and tumour steadily improved until the 2nd of October, when he worked with the hand, and inflammation was set up, and matter poured out underneath the tumour, which was now only dead skin. He had a linseed-meal poultice over the whole of the front and back of the hand, the partially dead surface of the tumour being dressed with mercurial ointment and white precipitate. On the fourth of October a little pus was discharged from the tumour, and all bad symptoms subsided. He continued the dressing until the 10th of October, when the hand appeared well. I have seen him since, and consider him cured.

ON PERIOSTEAL DISEASE AFFECTING THE DURA MATER.

By R. H. Goolden, M.D. Oxon., F.R.C.P.,
Assistant-Physician to St Thomas's Hospital.

(*Concluded from Nov. No., p* 356.)

The number of cases noted: where, and how, and when they occurred; their comparative frequency. The manner in which out-patients are enumerated in St. Thomas's Hospital objectionable. Description of table.

Since my last communication upon the subject of periosteal disease affecting the dura mater, I have noted exactly fifty cases as they occurred amongst the out-patients under my treatment at St. Thomas's Hospital. The notes are confined entirely to cases in which intermittent headache was the prominent symptom, and these include some few which might probably come under some other category than the periosteal. Nor are they all the cases which, for statistical purposes, ought to have been recorded: but they are sufficient for my present purpose, which is, to prove the applicability of my former induction to any subsequent experience. The cases all occurred during the months May, June, July, and August; and, to give some idea of the comparative frequency with which they occur, I may mention that the number of out-patients admitted under my care during that time has been 364; but, that there may be no mistake, I may mention that every patient who is under treatment above four weeks, is re-admitted and counted again. The physicians are not responsible for this mode of reckoning, which renders their reports less valuable for scientific purposes, but the number may fairly be computed at one-half: so that it may be inferred that one-fourth of the out-patients applying to me were cases in point, which is a much larger result than I had anticipated: more especially as I have not included all such cases, from want of time and assistance to report them; nor have I included any cases of periosteal disease in which the head was not implicated. In order to save the reader the trouble of wading through the particulars of every case, I have drawn up a table, which will show the most important points: namely,—the date of admission, initial of name, and age; the sex, and civil state of the patient; then the duration of the disease before applying for relief; then follows the headache, whether continuous or in paroxysms, or both, and whether followed by perspiration, the affirmative being indicated by a cross, the negative by a cipher. Then follows a column in which I have endeavoured to indicate any prominent morbid peculiarity, and it will be observed that there are several cases of epilepsy, of

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paralysis, and of stramus; and in the last column I have noted the result of treatment, that is to say, the length of time before every specific symptom was relieved, viz.—all headache and profuse perspiration, including epilepsy and paralysis. But I do not wish it to be inferred that all these patients were in a state of health, though most of them were so at the time that I marked them as relieved; but I pledge myself that there was no direct indication of periosteal disease of the dura mater when they were so marked, and where this has not been quite certain, I have stated, "no result."

With regard to epileptic and paralytic affections: in several instances the relief has been well marked; in others the result was unsatisfactory; but I think I may safely venture to affirm, that the success has been greater and more decided than in any plan of treating epileptic cases hitherto recommended, excluding, of course, those cases of epilepsy caused by mucous irritation.

Admitted.	Name.	Sex.	Age.	Condition.	How long Ill	Headache. Constant	Headache. Nightly Paroxysm.	Perspiration.	General disease.	Result.
May 14	J. J.	M.	56	Smith.	3 months	+	+	0	Pains in shoulder.....	Relieved in four weeks.
" 14	E. R.	F.	24	Married.	1 year	0	+	+		Relieved in five weeks.
" 14	G. K.	M.	21	Labourer.	3 years	+	+	+	Discharge from the ear	Relieved in two weeks.
April 3	E. G.	F.	59	Widow.	3 months	+	+	0		Relieved in four weeks.
May 10	A. B.	F.	17	Single.	5 months	+	+	+	Vomiting	Relieved in three weeks; returned on discontinuing medicine.
" 14	C. B.	F.	29	Married.	6 weeks	+	+	+	Facial neuralgia	Relieved in two weeks.
" 7	J. K.	M.	17	Ballast-heaver.	9 weeks	0	+	+	Syphilis three years ago	Relieved in one week.
" 24	J. F.	M.	37	Fellowship-porter.	2 years	+	+	+	Epilepsy every three weeks.....	Relieved in two weeks; has had no return of fit up to September.
" 24	J. S.	M.	19	Scale-maker.	2 years	+	+	+	Epilepsy; despondency.	Pains relieved in two weeks, but epilepsy &c. continue.
March 22	M. P.	F.	36	Married.	3 years	+	+	+	Periosteal disease of tibiæ	Relieved in two weeks.
May 31	M. D.	F.	23	Single.	Several years	+	+	+	General periosteal disease.....	Relieved in six weeks.
June 4	M. A. C.	F.	14		5 weeks	0	+	0	Sciatica	No result.
May 14	C. B.	F.	29	Married.	7 months	0	from 6 A.M. till 3 P.M.	+		Relieved in two weeks.
June 7	H. L.	F.	32	Single.	19 years	0	+	+	Discharge from the ear; four years' epilepsy; paralysis of right arm.	Pains relieved in two weeks; paralysis maintains.
" 11	W. C.	M.	36	Sailor.	5 weeks	0	+	+	Periosteal nodes	Relieved in one week.
" 11	J. B.	M.	25	Sailor	6 months	+	0	+	Node on frontal bone....	No result.
" 14	J. C.	F.	31	Single.	15 years	+	+	+	Epilepsy; periosteal nodes.....	No result.
" 24	J. B.	M.	52	Traveller.	Many years	+	+	+	Bronchitis.....	Relieved in five weeks.
" 21	M. B.	F.	25	Married.		0	+	+	Facial neuralgia	No result.
" 28	T. D.	M.	18	Japanner.	3 weeks	0	+	+	Epilepsy every day	Relieved in one week.
" 28	E. D.	F.	47	Widow.	12 months	0	+	+	Node at carpal end of radius.....	Relieved in four weeks.
July 2	E. P.	F.	36	Married.	2 years	+	+	+	Hysteria.....	No result.
" 2	M. H.	F.	40	Married.	4 years	0	+	+		Relieved in two weeks.
" 14	C. R.	M.	17	Sailor.	7 months	+	+	+	Epilepsy; paralysis	Relieved in three weeks.
" 5	W. R.	M.	35	Clerk.	6 weeks	0	daytime.	+	Loss of sensation in hands, feet, and lips ...	Relieved in two weeks.
" 5	H. E.	F.	30	Married.	6 years	0	+	+	Strumous bubo; paralysis of leg, arm, and hand	Relieved in four weeks.
" 5	S. O.	F.	18	Single.	5 months	0	3 paroxysms in 24 hours.	+		Relieved in two weeks.
" 9	J. O.	M.	50	Plasterer.	2 years	0	+	+		No result.
" 9	J. P.	M.	25		14 years	+	+	+	Two or three fits daily ..	Headache relieved in two weeks; no fit since the 11th of July.
" 16	H. H.	F.	34	Married.	From childhood	+	+	+	One fit three years ago; paralysis left side.	Relieved in four weeks; no paralysis left.
" 16	P. A.	F.	28	Married.	3 months	0	in the daytime.	0	Numbness in the arms and left leg; faintness and vomiting	Died suddenly, and an apoplectic clot found at the surface of the brain.
" 19	W. B.	M.	57	Gardener.	2 days	0	+	...	Swelling at the inner canthus of the eye; an acute attack of bronchitis	Died suddenly; cause not ascertained.
" 19	R. W.	M.	38	Irish.	7 years	0	+	+		Relieved in one week.
" 23	C. C.	F.	25	Married	6 months	0	+	+		Relieved in two weeks.
" 23	E. C.	F.	..	Married.	3 months	0	+	+		No result.
" 26	G. H.	M.	45	Long-shoreman.		0	+	0		Relieved in four weeks.
" 26	M. A. P.	F.	26	Married.	3 years	0	+	+	Loss of sensation and motion of left side of face and arms	No result.
" 30	B. W.	M.	73	Old Sailor.	18 months	0	+	+		Unfavourable.
" 30	J. B.	M.	11	Old Soldier.	4 months	+	+	+		Relieved in two weeks.
" 30	S. K.	F.	30	Married.	1 week	+	+	+		Relieved in one week.
Aug. 9	E. C.	F.	32	Single.		+	+	+		Relieved in two weeks.
" 9	S. E.	F.	23	Single.		+	+	+		Relieved in two weeks.

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THE POLICY AND PATHOLOGY OF INSANITY.

By Joshua Burgess, M.D. &c., London.

(Continued from Nov. No., p. 336.)

Diagnosis requires to be based upon physical manifestations, and expressed by physical signs, referring to an esoteric state or condition, having a strict relationship and accordance with the disease which it represents and reflects, and is not at all dependent upon æsthetic expressions, which in many diseases are absent, and even when present cannot be trusted as safe indices of disease.

The diagnostic phenomena attending and characterizing insanity have too general a reference to abnormal affections of the mind. Errors of thought, errors of the senses and of ideas, as also errors in practice and action, are indefinite, and cannot be traced to any physical relation capable of being demonstrated in reference to them, although this may occur at some future and more advanced state of physiological investigation. Thus at present we are not enabled to say that hallucinations and illusions, of whatever nature, ideal or hypochondriacal, are attributable to disease situate upon the cerebro-spinal and ganglionic systems; or that mania and delirium are attributable to disease seated on the brain and cerebral system; yet the probability exists that this version is not far wrong, and experience in the history, cure, and treatment of these diseases leads to this conclusion.

The possession of a correct diagnosis in insanity is a great desideratum, both in a medical and moral sense. To facilitate this in a medical sense, we have already arrived at the conclusion, that notwithstanding the brain and the cerebro-spinal systems may be supposed to be the proximate seats of these diseases, (if such definite phraseology may be permitted in so indefinite a proposition,) yet that the blood system and the heart exert invariably an equal influence during their continuance and progress, and that we arrive at a satisfactory result more certainly, by directing our remedial treatment to alleviate the condition of these functions; and although many disturbing circumstances are constantly present, yet, guided by this view of the subject, we shall find its history more clear, its treatment more efficacious, and our prognosis often satisfactory.

Diagnosis, in a moral point of view, may, perhaps, be considered still more important. If the physician could trace mental results to physical causes, as in other diseases, and if these should also prove sufficient to explain the phenomena of errors of thought, of the senses, and ideas; and errors of action, judgment, and practice; so as to be able to give testimony upon these points with clearness and precision, moral or constructive insanity would no longer continue a source of painful difficulty and indecision, but jurisprudential verdicts might be safely relied upon, aided and established by physiological laws.

Insanity has historical traditions, and a mysticism surrounding it, enveloped in the superstitions and prejudices of bygone ages. It has always proved most difficult to remove long existing impressions, however erroneous, associated with natural and physiological phenomena. Error in creeds and also in philosophy and natural history, is clung to with fondness and credulity; and on many occasions bigotry and superstition have resorted to persecution to sustain error, and have inflicted cruel judgments and martyrdom upon the magnanimous and fearless propagators of natural and abstract truths, upon which the foundations of philosophy have been erected, and her proudest, noblest, and most enduring edifices have been constructed. The human mind, moreover, is naturally prone to error, notwithstanding the immortal spirit of freedom and revelation which natural science and philosophy are constantly pouring into it: and many of the institutions of society, themselves the offspring of error, are also its patent promoters. How, then, need we wonder that the mind should become wrecked upon the shoals which surround it?

The blending of good and evil in our social state is a condition inseparable from the privileges we enjoy as reasonable and accountable beings, and is one of the inscrutable ordinations of an all-wise Providence. Man is the victim of moral epidemy in a similar sense, and under similar uncertain laws, that he becomes the victim of physical evil; and the revelations and spirit of inquiry, which philosophy, guided by religion, is instilling into human ways, may ameliorate this state by instructing him in the elementary condition of his mortal and immortal state. Power and authority have in all ages been leagued to oppose the instruction and enlightenment of the human race, since "knowledge is power," and which would inevitably be shared by those endowed with wisdom and philosophy, and serve to drive away slavishness from the human race, as the scales of the serpent are in due season moulted. Thus, ecclesiastical power, so many ages the chastiser of the world and mankind, having suffered a long process of decline, and arrived at a comparative state of insignificance and helplessness, manifests occasional paroxysms of renovation; and with loss of power still retains its authority with an unwonted vigour and tenacity, always exercised to enslave the human mind, and, if possible, to impede inquiry, and to belie both nature and philosophy; its inheritance being superstition, credulity, and a vapid idolatry, it must ultimately succumb before the spirit of freedom, knowledge, and science, guided by the practices of a pure religion.

These allusions show that error is instilled into the human mind, as it breathes the atmosphere which surrounds it. We have consequently too implicitly considered mental impropriety an abstraction, almost inalienable and inevitable.

The continuance of this mental perversity may be traced, in a great degree, to what was intended to be the pure source of social amelioration, and the harbinger of all improvement—namely, *Education*. The intellect, nourished by education, dates the origin of many of its difficulties, as it imbibes with this nourishment the dogmas and schemes of the day.

The creeds of the day have not much affection for logical demonstration, still less relationship with positive or physical truth, and too often demand a slavish and unmeaning devotion, without that vitality of worship which inspires veneration, and which springs from the manifestations of a divine nature.

The framework of education, when it does not bruise or confine the sap, gives nourishment, by admitting light, air, and sun, to the mind; but aiming to obtain large fruit prematurely, healthful growth is often prevented, and the intellectual tree fructs for a short season only, and becomes a dwarf. This framework requires a mechanical skill in its arrangement rarely practised: thus genial and well-timed instruction is preferable to a harsh, inflexible, and indiscriminating scheme of education.

With surrounding circumstances, we may rather wonder how reason is preserved; but our knowledge of the extent of insanity is limited, and we must not be deceived, since we are confided with the secret of by far the smaller portion of the victims which swell the lists of the insane. Insanity shuns instinctively its stronger brother, and craftily screening its infirmity, seeks either the crowded haunts and turmoil of the world, or passes unobserved into solitude, characterised

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and designated by the qualities of *eccentricity*, which must not be mistaken for that robust and healthful eccentricity, manifesting an independence of thought and action peculiar to vigorous minds, often for good, and sometimes for exalted purposes, indifferent to the sickly conventionalities surrounding it. Flashes of good or evil break the monotony of the diseased state we have described, and the patient keeps his own secret, if possible, which, if revealed to the judicial mind, would throw a new light, and discover a straight path for those decisions which have hitherto been obscure and tortuous, based upon crude and arbitrary definitions, and which have contemptuously rejected the intelligence which medical experience has attempted to cast over this phase of humanity, for the protection of the weak-minded and the insane.

Morals and metaphysics have their share, and no doubt a great influence, in abnormal affections of the mind, and over the exercise of thought and judgment; but not exclusively, since physical agencies have an abundant sway; and affections denominated mental have frequently no direct reference to the brain, the supposed parent of the mind, but are clearly traceable to physical causes, seated elsewhere, and in that sense are as strictly amenable to curative laws and the rules of medical art, as inflammation is amenable to the lancet and depletion.

The following case may assist to elucidate this idea:—R. W., a miller, about thirty years of age, a man of robust and vigorous frame, middle-sized, square and compact, and of about thirteen stone weight, of good constitution, and of ruddy and fair complexion, and his habits regular temperate. He gradually became eccentric and wayward, although perfectly sensible, and had no delusions, but did everything with hesitation and delay, and at length improperly and at improper times; not, however, neglecting the calls of nature; and he was good-natured, and free from either violence or vice. At length a state of passive but confirmed obstinacy succeeded, manifested in a dogged, yet quiet manner, without the expression of any feeling; his cast of features was calm and complacent, and not unpleasing, although a heaviness sometimes passed over them. He seemed indisposed to any position but standing, and rarely (never willingly) would sit down. He would remain for a day standing upright, and as rigid as a statue, from which he would be difficultly and mechanically removed. He seldom spoke, or even answered inquiries, and only reluctantly; the sense of hearing apparently being nevertheless correct, since he took notice, when addressed with attention and regard. Sensation seemed diminished, and the temperature of the surface low. He had acquired a habit of constantly pulling his hair up by the roots, and had nearly rendered the right side of the head bald by this practice, which was done without any expression or emotion. Suspicion was entertained that the seat of the disease was upon the origins of the nerves of volition, and that either effusion had occurred in the *theca vertebralis*, or some other centrical congestion of the cerebro-spinal system.—Under this impression, the following treatment was adopted:—Gentle laxatives were at first occasionally administered, to make the *prime viæ* patent; and a grain of calomel and also one of ipecacuanha within every twenty-four hours, to correct a sluggish action of the liver. On one occasion, having been taken to roam about in some large and very retired fields near to his residence, in which he occasionally took exercise, under the guidance of one who had great influence over him, and where he would sometimes be induced to walk, slow or quick, stopping on occasions for a considerable time, especially at a stile, gate, or other impediment; again, at other times he would climb them with unusual quickness, or stand immovable in the midst of a field, like a statue;—on one occasion (this was during his treatment,) having walked some distance, and passed over numerous stiles and gates, he at length placed himself astride one, and remained so long, that the gate was removed from its hinges, and he was in that way obliged to be dislodged; but no persuasion could induce him to walk. and he was ultimately brought upon the gate, carried by help sent for the purpose, to his home; he did not resist, or become in any way excited, or apparently disturbed by it. Under the impression named, that the nerves of volition and sensation were in some manner implicated, the following plan was adopted:—The hair was removed from the back of the head, as high as the superior curved line of the occipital bone, and a strip of cantharides plaster placed from that point downwards the whole length of the surface of the spinal column, terminating at the coccyx, about five inches in width, and continued for the duration of twenty-four hours. He seemed insensible to its action, although he lay upon it during the night, which was quite satisfactory, raising a continuous blister filled with serum; every means having been used to effect this object, the plaster having been sprinkled with fly-powder, &c., after which it was dressed with very strong savin ointment, to keep up the discharge; but it quickly healed. Another exactly similar plaster was applied before this had completely skinned, with the same insensibility; it also quickly healed, in defiance of savin ointment. This plan was persisted in, at first with very slight and imperceptible improvement, till six similar plasters, intermediated with savin ointment, had been applied; and the alterative also continued during this time. His obstinacy and obtuseness seemed very slightly relieved, till three or four blisters had been applied, and his habit of standing for a long time in one position, and of uprooting his hair, still remained. At length he manifested sensibility to the action of the cantharides, indicated by slight strangury, increased as they became repeated, and also by a decided sense of pain from their action, under which he at length *winced*, and he began to walk about with daily increased alertness, and to talk, and avoided lying on the blistered surface. In the end he became a great walker, quick in his movements, and entered freely into passing recreations; the liver and bowels acting correctly, and the temperature of the surface evidently increasing; and at the termination of seven or eight weeks, he was restored to his family quite recovered.

The manifestation of irritability of the neck of the bladder is always the harbinger of good, from the influence of cantharides becoming absorbed into the system, and disappointment in the prognosis has never occurred when this has taken place.

The history of this case may be considered to be a correct type of a numerous and constantly recurring series.

(To be Continued.)

MEDICINA MECHANICA.

By Isaac Pidduck, M.D.

A barrister complained of numbness in the anterior and middle part of the right thigh. The numbness had existed about four months, sometimes more and sometimes less perceptible, but never entirely removed, giving rise in the patient's mind, to the fear of paraplegia, or, as he termed it, the barrister's paralysis. As he had formerly suffered from spasmodic stricture and hæmorrhage into the bladder, from passing the catheter, it was supposed that the numb-

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ness might be symptomatic of some morbid condition of the urino-genital organs; but only negative replies were elicited by inquiries directed to ascertain that point.

As he was suffering from febrile catarrh, a purgative pill and a sudorific draught were prescribed.—From the operation of these remedies some relief from the numbness was obtained; but in two days it returned in its former degree. It occurred to me, knowing that the occupation of my patient was sedentary, that the numbness might be entirely local, occasioned by sitting in some particular position. On requesting him to show me how he sat at his writing-table, I saw instantly how the numbness had been produced and perpetuated from day to day; for instead of sitting opposite, he sat sideways to his table. This position threw the principal weight of his body on the cutaneous branches of the sciatic nerve; and hence the local numbness was clearly traced to partial pressure; and this was further confirmed by a sensation of a glow of warmth following the numbness, after the pressure was removed.

This case is not recorded for the sake of anything extraordinary either in its nature or its treatment, but for the very opposite reason—the frequency of the cause, and the simplicity of its cure. In anomalous affections of the nerves, unattended by disorders of health, careful investigation frequently leads to a discovery both of the disease and its remedy. The shoemaker, for instance, may suffer from constant gastralgia, owing to the pressure of the *last* on the epigastric region. The scribe may suffer from pain in the left hypochondriac region, from pressure against the desk. Pain may be felt in the knee-joint from pressure of a garter. Headache may arise from occupations occasioning a constant drag upon the cervical region by the prone position of the head, as in milliners and other needlewomen. Pains and loss of power and sensibility may be felt in the arms and hands, by sleeping on the back, with the arms crossed over the head. Pains and loss of power may be produced in the fingers and wrist by grasping the pen too firmly in writing. This generally happens to persons whose handwriting is good, but whose hand has become unsteady; the firm grasp of the pen is for the purpose of steadying the hand. It is probable that to this cause—viz., holding the brush—more than to the poison of lead, the wrist-drop of house-painters may be owing. Pains in the larynx and hoarseness of voice may be occasioned by reading aloud and preaching, with the head bending over the book or manuscript. Cases of this kind are of frequent occurrence; they are intractable to remedies, but speedily cease on avoiding the exciting cause.

ON CONCUSSION OF THE BRAIN.

By J. Ingham Ikin, Esq., M.R.C.S., L.S.A., Leeds.

From perusing the Mirror of the Practice of Medicine and Surgery, and the notice of interesting cases it contains, I am reminded of a few cases that have fallen under my care, a slight notice of which may perhaps be worth recording in The Lancet. From either carelessness or want of leisure, most surgeons are apt to refer to hospital reports for the perusal of cases, rather than be at the trouble of transcribing those that happen in their own practice. Hence, as has often been stated, much valuable matter and statistical information as to the result of disease or accident, is withheld from the profession. Whilst kept in suspense by a wearisome midwifery case, I write out a few that readily recur to my mind, which are not altogether devoid of interest. In one of your late numbers there was a notice of some cases of concussion of the brain: I will briefly state the general particulars of three or four cases.

Now it has often been stated, when speaking or writing on accidents to the head, and their various symptoms, that discharge of blood from the ears is a symptom that indicates fracture of the base of the cranium. That this is often the case is doubtless correct, but that it is so invariably may be justly questioned.

Case 1.—Mr. R——, about twenty-five years of age, a healthy, fine young man, was thrown out of his gig by his horse running away and dashing against a heap of stones. He was taken up insensible and carried home. He continued unconscious for some hours; his face was much bruised and cut, and the scalp severely wounded by the sharp edges of stone he had fallen against; there was a discharge of blood from both ears, which continued in small quantities for two or three days. Fracture of the skull was suspected at first, but could not be detected. On recovering the shock he complained of misty vision, had great intolerance of light, pain in the head, and vomited from time to time during the night following the accident. The next day the symptoms of reaction were such as to call for bleeding with two dozen leeches, the application of mustard cataplasms to the back of the neck, the administration of an effective purgative, and an antimonial saline. He was kept in a dark room, and perfectly quiet for about ten days, and at the end of a fortnight all alarming symptoms subsided, and in three weeks he was discharged, with the caution to apply to me on the slightest return of the sickness, dimness of vision, or pain in the head. With the exception of ordering an occasional aperient, he did not require further treatment, as the wounds healed kindly, and, I must add, he attended most strictly to my injunctions as to his diet and the avoidance of stimulants, &c.

Case 2.—Mr.——, a cavalry officer, a tall, stout young man, weighing between thirteen and fourteen stone, was thrown out of a tilbury, by his horse taking fright and running against the gate-post of the barrack yard; he was thrown out, and pitched on his head and shoulder. The result was concussion of the brain, contusion of the shoulder-joint, and fracture of the clavicle. The concussion of the brain displayed itself by insensibility, which did not, however, continue above half an hour, and during the evening the pulse rose to near a hundred, and he became hot, irritable, and restless. He was now bled in the arm, took a purgative, and had his feet put into hot water mixed with mustard. The clavicle was not bandaged till next day, as from the swelling and pain in the shoulder it required fomentation for some time, and it was not desirable to apply bandages till some hours had elapsed. For two or three days the head symptoms continued alarming—pain, intolerance of light, &c. These, however, gradually subsided, and no danger was apprehended, and I discontinued seeing him, though he was still under the care of the surgeon of the regiment, absent at the time I first saw him.

I heard afterwards that he was an imprudent young man, and difficult to manage, though he completely recovered, it was thought, from the effects of his accident, but that about nine months after it, he got leave of absence to visit his relations at Devonport, took a short trip by sea, was violently sea-sick, and died comatose from the effects a few days after landing. We may fairly infer that serious injury had happened to the brain from his fall, and that the congestion and straining from the sea-sickness acted upon a material already injured and shaken by the previous concussion. I never heard whether a post-mortem examination took place or not.

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Case 3.—A gentleman riding home one dark night at a good pace, came suddenly upon some sheep resting on the road; his horse fell, and the rider was thrown with considerable violence on his head; he was removed to a cottage at the roadside, and I was sent for. I found him cold, totally insensible, pupils dilated, pulse scarcely perceptible, a wound of the scalp just above and behind the ear; there was a discharge of bloody froth from his mouth, and his appearance was altogether most deathly and alarming. His limbs were not injured. A warm cordial was given, or rather poured down the throat, ammonia applied to the nose, gentle friction made on the feet and legs, and the body wrapped in a warm blanket. The propriety of moving him was the difficulty to my mind, but after reflection, and waiting till the body was warm and the pulse had returned, I decided it would be safer to run the risk of an immediate removal than defer it till re-action was fairly established, and the shaking of a carriage would be more acutely felt; he was therefore removed to his residence, about five miles distant. At the expiration of six hours he became conscious, but the pain in his head, the tendency to sleep, and to speak incoherently, vomiting, intolerance of noise, light, or being touched in any way, continued for above forty-eight hours, and some of these symptoms for four or five days. He was bled with leeches, freely purged, and as soon as the vomiting discontinued, took antimonial salines. In the way of food he had little or nothing for the first week, nor did he ask for anything except a drink of tea or toast-and-water. The head symptoms gradually subsided, though his recovery was tedious and his restoration to health not perfect for above two years from the time of the accident, as the frequent return during that time of attacks of sickness, headache, and irritability plainly indicated; perfect quiet, leeches, aperients, and counter-irritation had to be resorted to from time to time. Ultimately, every unfavourable symptom subsided, and he is now apparently a strong man.

The long duration and the frequent return of these head symptoms for so long a period after the accident, induce me to think that this was something more than a case of simple concussion. We know, from experience and from the publication of many striking cases, that injuries to the head, blows, falls, &c., though apparently recovered from, may and do often produce some lesion of the cerebrum, which, though it may lie comparatively dormant for years, ultimately brings on a fatal attack, and on examination of the brain after death, morbid thickening of its coverings, abscess, effusion, a blood or apoplectic cyst, or softening of its structure, may be found to exist.

Case 4.—Mr. G——, M.P., on taking a fence of post and rails, while hunting, fell on his head, and his horse upon him. I happened to be close at hand, (for I must admit I am not one of those who would abolish this noble sport, or purposely avoid it, or consider it more worthy of censure than fishing, shooting, or any other innocent relaxation; for relaxation *must* be taken by all, in one form or another, and *is* taken often in a much less blameless mode than in an occasional day's hunting in a well-regulated and gentlemanly field.*) I saw him almost directly, just in time to save him much torture from our officious friends, about "to pull his neck in," "put him on his legs," "pour brandy down his throat," and adopt other *active* measures for his relief, as they thought. Speaking of "pulling necks in," I cannot refrain from naming an amusing but rather awkward circumstance, which happened to a friend of my own. He was in the habit of hunting, but unfortunately had a very bad figure—was short, had high shoulders, a peculiarly short neck, and rather a hump-back. One day he had a fall, and lay for a moment or two helpless on the ground, when two of the field came to his assistance, and set to work to give him relief, one pulling his legs, the other his head, thinking to pull his back straight, and "his neck in," when the discomforted and helpless, crooked little Nimrod exclaimed, "For God's sake let me alone; I was born so,"—much to the wonder of his sympathizing friends, who rather tardily discontinued their aid.

But to the case in hand. Mr. G—— was insensible, and continued so for above an hour—cold, almost pulseless. He had received a blow from the horse on his head, as well as the shake from the fall: the blow of the horse's shoe was to be seen on his scalp, for it had cut through his hunting-cap, which had doubtless saved his life. I let him remain on the ground some time, just supporting his head a little, wrapping his body and feet in a coat some one was kind enough to lend, untied his neckcloth, and then poured gently a little wine into his throat, but found it was useless, as he made no effort to swallow. After a lapse of near an hour, we got a carriage, and removed him to the nearest residence, when he was put to bed, wrapped in hot blankets, and was able to take a little negus. Not being willing to remain at a stranger's though he would have had every comfort and necessary attendance, I removed him, in an easy carriage, some seven or eight miles, to the friend's house where he was visiting: for I may add, he represented a southern county, and was only on a visit in Yorkshire; and hunting with strangers, he was very anxious to ride forward and distinguish himself; indeed, it had been remarked, he was "too keen," and was sure to have a "spill" before the day was over; and so it happened. During his removal, he fainted twice, and took a little brandy-and-water. He passed a sleepless night, full of pain, and could scarcely move, as his shoulder was much contused, and his sides tender to the touch; indeed, I suspected, though I could not satisfactorily ascertain, that one or two of his ribs were broken, for he could not bear a minute examination of them, and I was more uneasy about the head symptoms than anything else. Next day he was bled freely with leeches, took a purgative and a saline, and was kept in a dark room, on the lowest possible diet. For two or three days he saw objects either double or indistinctly, and his hearing was painfully acute, with a sensation of a "whizzing in his ear;" but at the expiration of a week all these symptoms had left him, and he was comparatively well, with the exception of his inability to dress himself, from his contused shoulder and the bruised state of the muscles of his arm and back. He left for the south at the end of the week, as he was obliged, from his engagements, to do so, not of course perfectly well, but sufficiently recovered to travel. I heard afterwards, that about a year after his visit in Yorkshire, he took what was described to me as a form of low fever, and that he died after a short illness. I never have been able to hear the precise particulars or symptoms of his fatal illness, or whether a post-mortem examination was made.

* Sir A. Cooper was fond of field sports. Liston loved a day's hunting, and, as is well known, was in the habit of hunting regularly in Scotland. Some amusing anecdotes are told of him.

ON TWO CASES OF STRANGULATED HERNIA.

By John Mountford, Esq., M.R.C.S.,
House-Surgeon to the London Hospital.

Some short time since, I took advantage of your pages to record what to me seemed a very valuable case of strangulated hernia. Two cases have occurred

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lately, in the practice of this hospital, different in character, and, I am happy to say, in result, which tend forcibly to illustrate one point in the remarks which I appended to the former paper—viz., the importance of operating early; not that I would advocate haste, or give less than their fair value to the means most likely to promote reduction; yet I would at the same time express my firm conviction, that if the knife were in many cases used more promptly, life would more frequently be saved.

Maria B——, aged thirty-eight, was admitted, Dec. 3, 1850, with a small tumour in the right groin, presenting the characteristics of a strangulated femoral hernia. She stated that she was the subject of double rupture, the hernia on the left side having existed upwards of twenty years; that on the right, for fourteen years. Until within the last two years and a half, neither had given her any trouble; but since that period she had been compelled to wear a double truss. For about three weeks previous to her admission, she had suffered from an attack of rheumatic fever, which compelled her to keep her bed. A week after she was laid up, she found some difficulty in returning the hernia on the right side, and this continued until Saturday, Nov. 30th, when she was attacked with great pain throughout the whole abdomen, but more particularly about the umbilicus; she was troubled with a sense of fulness, and nausea came on in the course of the day, succeeded by vomiting; yet her bowels continued to act up to the time of her admission, and even once after. When admitted, she complained of great pain in her back and abdomen, and the vomiting continued. The tumour was about the size of a small walnut, very firm and incompressible, and being evidently one of the class of herniæ which is so much damaged by delay and the unnecessary use of the taxis and its auxiliaries, I deemed it proper to send for the surgeon of the week. Mr. Luke being absent from home, Mr. Critchett attended, and having examined the case, at once advised an operation, which was, after some hesitation, consented to. An incision was made, about an inch and a half in length, commencing an inch above the upper margin of the tumour; the subjacent cellular tissue and fascia were then divided down to the sac. Mr. Critchett passed his finger to the seat of stricture, (which was in this case Gimbernat's ligament,) and returned the gut without opening the sac. There was a little arterial hæmorrhage; but as no vessel could be perceived, the wound was plugged with lint. The patient was then placed in bed, and ordered an opiate.

December 4th.—She has passed a favourable night. The lint was removed, and the edges of the wound brought together. She continued to go on well, with the exception of a little return of her rheumatism, and a slight attack of diarrhœa, until January 15th, 1851, when she was discharged cured.

The second case, which was under the immediate care of my colleague, Mr. Prater, presented some similar features. The patient was a woman, aged 47, who had been the subject of hernia for four days only, having first perceived it while carrying some water up stairs, following her occupation of a nurse. On examination, a tumour about the size of a bantam's egg was found in the right groin, not very tender, but tense and unyielding. She complained of pain over the whole abdomen, and had vomited frequently during the day. The bowels had been relieved in the course of the morning. Mr. Curling, who saw her shortly after her admission, recommended the use of ice, and requested, that if after the lapse of a few hours, this produced no effect, Mr. Critchett should be called, as the latter gentleman had seen the patient previous to her coming to the hospital. The symptoms did not abate, and Mr. Critchett, on examining the patient, recommended an operation, which was at once proceeded with. After the preliminary steps, Gimbernat's ligament was divided, but the hernia could not be returned, and Mr. Critchett, on passing his finger backwards, found the obstruction to be a small band of condensed fascia, on freeing which, the gut was reduced without opening the sac. The after-treatment was much as usual, and the patient left the hospital cured, January 15th.

In each of these cases it will be perceived that the bowels were relieved a very short time before the operation was performed, and in neither was the sac opened. It is only, I think, by collecting a number of cases, that the relative value of operating with or without opening the sac, can be determined; and a wish to prove the superiority of the latter operation must, in some measure, be my apology for troubling you with this paper.

P.S.—I find, by the record of operations, that Mr. Luke has operated on seventeen cases of femoral hernia since 1843. In fifteen of the cases the sac was not opened, and but two of them proved fatal.

POISONING BY THE BITE OF AN ADDER.

By George Lambert, Esq., London Hospital.

Having observed in The Lancet a statement of a case of poisoning by the bite of an adder, I beg to forward the following outline of a similar case:—

George R——, aged twenty-three, weaver, was admitted into the London Hospital, May 18, 1851, under the care of Mr. Adams. The patient states that while walking in Epping Forest, near Chigwell, he heard a rustling in the bushes, and on going to see what made the noise, observed what he thought was a common snake. He attempted to catch it, and was bitten on the ring finger of the ring hand. He was much alarmed at the time, and about twenty minutes afterwards vomited a large quantity of bitter yellow fluid; was much purged; had desire to micturate, but could not; felt very faint and sleepy, and seemed as though he were deprived of sight. A countryman who was near the place applied some adder's fat and chewed ash-leaf to the finger, but the patient did not experience any benefit. Being unable to procure any conveyance to London, he was obliged to wait till a cart passed, which took him to Ilford, whence he came by rail to the hospital, which he reached about six hours after the injury had been inflicted.

Appearance when admitted.—The patient feels cold and sick; great anxiety expressed in the countenance, and the pulse small. The finger was white, but little swollen; the back of the hand very much swollen; red lines reaching to the elbow; forearm not much swollen or discoloured, but rather tender. A wet bandage was applied to hand and forearm, and the extremity was placed upon an inclined plane. Ordered three grains of sesquicarbonate of ammonia and an ounce of camphor mixture every four hours, and four ounces of brandy to be given during the night.

19th.—Ten A.M.: Has not slept; suffers no pain; pulse improved; arm much swollen and ecchymosed, the discoloration extending to the axilla; the glands in that region also much swollen and inflamed. Apply soap liniments to the axilla; continue the medicines and bandage; also envelop the extremity in flannel. Nine P.M.: Inflammation subsiding; ecchymosis extended down the side to the crest of the ilium; bowels not having been relieved, one scruple of a powder composed of calomel with jalap is ordered.

20th.—Improving in health; ecchymosis deepening in colour.

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22nd.—Quite well in health; arm and side of a deep purple hue.

24th & 25th.—The same.

26th.—Colour decreasing, and becoming browner.

28th.—The forearm and elbow feel very hard, and the patient complains of pain and stiffness on attempting to bend the elbow. Ordered the arm to be rubbed with soap-liniment. The discoloration and stiffness gradually disappeared, and the patient was discharged cured, June 3.

The circumstances which are the most worthy of remark in this case are the extreme prostration of strength and the extensive ecchymosis, which exceeded in intensity of colour and extent anything I have ever seen.

NECROSIS OF THE TIBIA.

OPERATION; CURE.

By William Luxton, Esq., M.R.C.S.,
LATE HOUSE-SURGEON TO KING'S COLLEGE HOSPITAL.

Case 1.—Mr. J. G——, aged twenty-two, a farmer in Devonshire, applied to me twelve months ago on account of a bad leg, which disabled him, and prevented his walking with any comfort. There were several openings of a fistulous appearance over the tibia, through which a probe, when passed, detected dead bone deep in the leg; very thick pus was constantly discharged from each of them; the bone was loose in some situations, but firm in others. The tibia from the knee to the ankle was very much enlarged, and irregular on its surface and margins, and the tissues over it very brawny and livid. In August, 1851, he again showed me his leg; and as I ascertained that the bone was loose in all situations, I advised him to consent to its removal. The history of the case is, that four years ago he fell and struck the upper part of the tibia on a stone. The calf of his leg swelled, and he felt deep-seated pain in the bone. He could not walk, and at the expiration of a fortnight an abscess was opened over the tibia, which discharged, he thinks, two quarts of pus. The swelling gradually subsided, and several other abscesses formed, whose openings dwindled down into the present fistulous apertures.

Sept. 1, 1851.—To-day, in the presence of Mr. Dingley, Mr. Tidboald, and my father, having probed the limb and found the bone loose as above described, I made two openings with a large trephine just below the tubercle of the tibia, so as to resemble the figure 8, and then cutting away the two corners with the pliers, I removed several large sequestra through the oval aperture thus formed. A similar operation just above the ankle enabled me to extract the remainder of the dead bone; and by introducing my finger I found the soft bed of granulations lining the interior of the new bone to be free from all splinters. No chloroform was given, but the operation was well borne by the patient. Water dressing and thirty minims of tincture of opium immediately. From this time he has continued to do well, and when I last saw him, on October 2nd, the wound was nearly filled up with ganulations. Collodion has been daily applied around the wound, and the leg strapped with adhesive plaster. He has improved considerably in health and appearance since the operation, and eats, drinks, and sleeps well.

Case 2.—William R——, aged nineteen, a smith, a native of Winkleigh in Devonshire; has had a bad leg for four years, which disables him from walking.—Four years ago, while working in the shop, a scale of red-hot iron fell from the anvil on his leg just above the ankle, which produced a small sore; he walked a long distance on that and the following day, but soon felt deep-seated pain in his leg, which swelled very much and was lanced as soon as matter was detected.

Present date.—The leg is much swollen for about six inches upwards from the ankle, where it measures twelve and a half inches round. There is a fistulous passage over the inner malleolus communicating with dead bone, and a few inches above this, another. Pulse slow and regular; countenance pale; no pain in leg.

Sept. 12th.—To-day, in the presence of my father, Mr. Dingley, and Mr. Stephen Townsend, I made an incision, connecting the two sinuses, and then crossing it with another at right angles, I dissected back the four flaps of integument thus formed, applied the trephine to the tibia, and perforated a new formation of bone of about half an inch in thickness, underneath which the dead bone was found. Next, having enlarged the circular opening thus formed with the bone forceps, I was enabled to extract the sequestra, which were numerous, involving the whole thickness of the tibia. The integuments were remarkably brawny, and the new bone very soft and vascular.—Water dressing was applied to the limb, and the patient to take seven minims of Battley's solution immediately. No chloroform was given.

13th.—This morning on removing the dressing it was found to be very bloody, but the bleeding seems to have now ceased. The edges of the flaps are livid, and will slough. Pain in head; tongue coated. Black draught, one ounce, directly; nitrate of potass, ten grains; acetate of ammonia mixture, one ounce, three times a day.

30th.—From the date of the last report he has done well. The edges of the wound have been dressed with collodion, and the limb well strapped daily. The wound is nearly filled up, and his general health much improved.

PORTRAITS AND BIOGRAPHIES OF DISTINGUISHED PRACTITIONERS.

The Biography of

SIR CHARLES HASTINGS, M.D.,

FOUNDER OF THE
PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Sir Charles Hastings is the sixth son of the Rev. James Hastings, rector of Martley, in the county of Worcester, and is descended from that ancient branch of the family which was so long located at Daylesford, in the same county, and that produced in more modern times the celebrated Warren Hastings. Sir Charles was born at Ludlow, on the 11th day of January, 1794, his father being at that time rector of Bitterley, a village a few miles distant from the former place. After the removal of the family to Martley, he received his early instruction at a grammar school at that place, which for some time was in great repute, many of the sons of the leading men in the county being sent there for rudimentary education. During his boyhood he showed no taste for book-learning, and was indeed rather conspicuous for getting into disgrace with his master; but, on the other hand, every kind of field-sports—hunting, racing, shooting, cock-fighting, and all the active sports of life, were the objects of his warm pursuit; so that he was generally remarked in his family as an idle boy at his books, but as the most active and energetic in play and at all juvenile exploits. Passionately fond, moreover, of rural scenery, he delighted in wandering through the fields, and in noticing the productions of

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nature which are so abundantly scattered through the rich district where he passed his boyhood. On a mind prone to such influences, the scenery around could not fail to make a deep and lasting impression; in its great fertility, in its singular diversity of hill and valley, watered by the winding Teme, enriched by numerous woods, and bounded in the distance by the picturesque range of the Malverns, it presents a spectacle of romantic beauty forgotten by few who have had the good fortune to look upon it. The heart of the boy was ardently susceptible of its attractions, and to this day Sir Charles never revisits the abode of his early youth without experiencing the most lively emotions of pleasure.

His decided turn for active life led him, as a boy, to have a taste for the army, and at one time he sought to be placed at Woolwich, with a view to a commission in the Artillery. When this scheme was frustrated, he became indifferent as to his choice of a profession; but on showing, some time afterwards, a slight predilection for the pursuit of medicine, the design was thought more feasible than his former one, and accordingly, in 1810, he was placed at Stourport, in Worcestershire, with Mr. Jukes and Mr. Watson, two surgeons then resident there. These gentlemen were justly esteemed for their high medical and surgical qualifications, and enjoyed to an unparalleled extent the confidence of the chief persons of the neighbourhood; Mr. Hastings had, in consequence, great opportunities of learning the rudimentary parts of his profession. For the first few months, however, of his sojourn at Stourport, he does not seem to have had any particular desire to acquire knowledge, or to distinguish himself in life; and it was not till the occurrence of some family circumstances impressed upon his mind the necessity of working out his own fortune, that he engaged with anything like zeal in his professional pursuits. He well remembers the alteration which at that time took place in his sentiments: henceforth his whole line of action was changed; having a firm resolve to rise in life by his own unassisted efforts, and feeling convinced that the profession he had chosen afforded him the means of doing so, he from that hour devoted all the powers of his mind and body to acquire the necessary knowledge. He now became a diligent and attentive pupil, solicitous to win the esteem and regard of those who had the direction of his studies; and so well did he succeed in this his first effort, that he soon became the favourite pupil of his teachers, and not many months elapsed before they had a signal opportunity of testifying their admiration of his exertions.

It had been announced, in the newspapers, that in a few months there would be a vacancy in the office of house-surgeon to the County Hospital, and Mr. Hastings was one day astonished by an intimation from his teachers, that, as a reward for his praiseworthy conduct during the last eighteen months, they had determined, if possible, to obtain the situation for him. The ground was already occupied by an old pupil of the Infirmary, but an active canvass of the governors was nevertheless commenced, and a contest resolved on. Previous to the election, it was thought desirable to send the young aspirant to London for some months, in order that he might be the better qualified for the important duties of the office, and accordingly he there attended the lectures of Mr. Brookes, Mr. Taunton, Dr. Hooper, and Dr. Ager. He returned to the county in the autumn of 1812, and after one of the most fierce contests ever known, was elected house-surgeon to the Worcester Infirmary by a majority of one vote, the numbers for the candidates being respectively 133 and 134.

To a youth of eighteen (for Mr. Hastings had as yet attained no greater age) such a position brought, with its honours, a weight of responsibility that might almost have been deemed overwhelming; but he set himself fearlessly to the task before him, for he was confident in his resources, and resolved to devote all his energies to the due fulfilment of his duties. That he succeeded completely in satisfying the requirements of the governors, and the more critical observation of the medical officers, is evinced by the fact that within three months of his appointment, several of those who had opposed his election on the ground of his youth and inexperience, voluntarily expressed an opinion that the office was never more efficiently filled. But the young house-surgeon was not satisfied with simply fulfilling the routine of his daily duties: for he regarded the appointment as one most valuable for his future prospects, on account of the opportunity it afforded him of pursuing his medical studies to advantage. He therefore not only took pains to improve himself in general knowledge, but also laid down a plan to be steadily adopted, for realising the greatest professional advancement, and for reaping a rich harvest in the field that opened before him. With this view he adopted a system for taking down all the cases, commenced a collection of morbid preparations, and obtained permission from the governors to make post-mortem examinations in all fatal cases, a plan which had been rarely had recourse to before in the Infirmary. He was very ardent in this part of his labours, and on more than one occasion, when the objections of friends had prevented the necessary examination before the body left the hospital, means were adopted afterwards to secure a view of the morbid parts.

It was the good fortune of the young house-surgeon at this period to be thrown into communication with Dr. Wilson Philip, who at that time held the office of physician to the Worcester Infirmary, and whose fame as a physiologist then stood high. Mr. Hastings had already commenced some experiments on digestion; and it happened that soon after he mentioned them to Dr. Philip, M. Le Gallois published the results of his experimental inquiry into the functions of the nervous system; results which appeared to Dr. Wilson Philip to be erroneous. Determined on putting them to a practical test, he applied to Mr. Hastings to conduct the experimental inquiry for him, and we need hardly say that the application met the most zealous response; for many months the subject of our memoir was engaged in numerous experiments on the functions of the cerebral, spinal and ganglionic systems of nerves, and he had the satisfaction of seeing the results published by Dr. Wilson Philip, both in the *Philosophical Transactions* and also in separate works.

The most interesting series were those in which the vagus nerve was divided and the effects of galvanism in restoring the injured functions of the stomach were shown; a series of the more importance, because Dr. Philip was then engaged in a long controversy, in which he maintained the identity of galvanism with the nervous energy. Although the experiments did not lead Mr. Hastings to concur in this view, he derived the greatest possible advantage from the intimate knowledge he thus acquired of the obscure functions of the nervous system. He also derived from the same source an opportunity of witnessing the application of galvanism to many cases of serious disease, for Dr. Philip prescribed its use very generally in all nervous affections, as well as in bronchial and dyspeptic disorders. He was led to this course of treatment by his conviction, already mentioned, of the identity of galvanism with the nervous energy;

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and the condition of the mucous membrane of the bronchia and stomach in the experiments on rabbits, where the vagus nerve on one side only was divided, served to strengthen this opinion. Although the result of this treatment was various, it did not, on the whole, produce the great benefits which *a priori* reasoning had led Dr. Wilson Philip to expect from it.

Thus happily and beneficially, in the active pursuit of physiological and pathological knowledge, and in the busy exercise of his profession, were spent three years of Mr. Hastings' life; and he had only to regret that on three or four occasions during this period his health gave way, and rendered it necessary for him to withdraw for a time from his labours.

In the autumn of 1815 a material change occurred in his plans and prospects. The kind friends with whom he had commenced his professional career, and who had already done him such service, now proposed to him that he should leave the scene of his early exertions and repair to the Edinburgh University, with a view of attaining the "summos medicinæ honores" in that celebrated school. It was not without a struggle that he finally determined to quit the hospital which had afforded to him a field for so much interesting and useful study; but in this he yielded to the advice of those who had shown so sincere a desire for his professional advancement.

Accordingly, late in the autumnal session of 1815, Mr. Hastings matriculated at Edinburgh. He was the bearer, on this occasion, of introductory letters to all the leading professors in the University; and though such letters are usually merely formal, and of but little advantage to the student, yet in his case it was not so, for the reputation of his physiological and pathological studies had preceded him at the University, and he received signal marks of regard from every one of the professors. He was introduced by the late Dr. Gordon to the Royal Medical Society, and it fortunately happened that, on the very first night of his attendance at those celebrated meetings, he was enabled to take a prominent part in the discussion. The subject which occupied the attention of the Society was Crawford's Theory of Animal Heat; and as Mr. Hastings had been making experiments with Dr. Philip, to demonstrate the agency of the nervous system in the development of animal heat, the subject was fresh in his recollection, and he was enabled, though only a visitor, readily to express his opinion. This led him to be deeply interested in the discussions of the Society, and, as long as he remained at the University, it was his regular habit to be present at their meetings, at which he very frequently delivered his impressions on the subject for debate. At that time the names of Gregory, Monro and Duncan still lent their enchantment to Edinburgh, and Mr. Hastings entered himself as a pupil to the lectures of each of these professors. From Dr. Monro he received very marked attention, particularly in the free access which he obtained to that gentleman's collection of anatomical preparations; and it is but fair to say, that the professor took great interest in the experiments on the functions of the nervous system, and caused Mr. Hastings to repeat some of them before his class. The class of Dr. Hope also, on Chemistry, was then overflowing in numbers, and his practised skill as an experimenter gave the greatest satisfaction, and could not fail to instil into the minds of his pupils an ardent love for the science; while even more popular with the medical students of the University were the lectures on Physiology, which were at time delivered by Dr. Gordon. But it was not only in the medical school that Edinburgh presented attractions for the student, for at this period a galaxy of stars of the first magnitude shed unequalled lustre over the society of modern Athens. Walter Scott, Jeffrey, Playfair, Leslie, Brown and Jameson were still active and vigorous, and contributed as much by their social bearing as by their writing and prelections to the enjoyment of any one who then visited that seat of learning, and was fortunate enough to be admitted into the society of its *savans*.

It was amidst these favourable circumstances that our student commenced his career, and the winter session was passed with great profit and delight. It was the more so that he was enabled to gratify in some degree his taste for physiological inquiry, by assisting a friend in a long series of experiments on transfusion, the object of which was to prove, by a chain of induction, the possibility of substituting the blood of one animal for that of another without interfering with the health of either. The results of these experiments were published in the inaugural thesis of Dr Leacock, of Barbadoes, and they unfolded many curious physiological facts.

As the spring of the year approached, Mr. Hastings was affected by so serious a bronchial attack, brought on by the cold winds of the north, that he was obliged, under the advice of Dr. Gregory, to give up all his interesting pursuits, to quit the University, and seek the restoration of his health in the mild climate and soft breezes of Worcestershire. This had the desired effect in relieving the pulmonary symptoms; but it was not till late in the autumn that he was enabled to return to the University, and even then the state of his health compelled him to lessen his usual exertions. Nevertheless, though his attendance at lectures and at the Medical Society was often interrupted, he pursued his academical course, and felt an increasing interest in his profession. After the severity of the winter had passed, his health became stronger, and early in the spring he undertook an experimental inquiry into the action of the blood-vessels in health and disease, with a view more especially to demonstrate an independent vital contractile power inherent in the arterial, capillary and venous systems. In this investigation he spent much of his time during the year 1817, and for many weeks passed several hours each day in microscopical observations on the capillaries, both in their natural state and when under the influence of various stimuli. Mr. Hastings had previously studied with great care the authors who had written on the much-agitated doctrine of the irritability of the bloodvessels, and his object was to bring under experimental research the various opinions that had been maintained on the subject, from the celebrated publications of Haller and Verschuir to the more recent inquiries of Drs. Thomson and Wilson Philip. It will be considered remarkable by those who are aware of the now almost universal application of the microscope to physiological and pathological investigation, that Mr. Hastings was the only student in the University of Edinburgh who at that time used the instrument with this object; and so little was it held in esteem, that many of his fellow-students entertained much doubt of any profitable result accruing from his labours. But he was not to be thwarted by these forebodings, and pursued his anxious inquiry under the abiding conviction that he should substantiate some points with regard to the action of the capillaries which would tend to elucidate the phenomena of inflammation.

During the summer session he was in some degree diverted from these labours by being unexpectedly called upon to undertake the duties of clinical clerk to Dr. Home. This arose from the unfortunate death of one of the clinical clerks from the fever then prevalent in Edinburgh; and Mr. Hastings, thinking

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this a good opportunity of studying the character of fever, volunteered his services, which were immediately accepted. This caused him to spend three months in close observation of the cases in the fever ward under the direction of Dr. Home, who was allowed to be the best clinical professor of the day. An incident occurred at this time which may be mentioned as singularly characteristic of the subject of this memoir. When Mr. Hastings was introduced into his office, he could not fail to be struck by the inferiority in respect of the cleanliness of the wards and of the quality of the diet, as compared with what he had been accustomed to in the Worcester Infirmary. This he mentioned to his friend, the late Dr. John Sims, who was then clerk to Dr. Hamilton, and had been previously house-surgeon to the Manchester Hospital. Dr. Sims concurred in the opinion that the economy of the Edinburgh Infirmary was, in most respects, inferior to that of our English ones, and, being a member of the Society of Friends, he mentioned the matter to some of the quakers connected with the management of the hospital. This led to the formation of a committee of inquiry, of which Jeffrey and other friends of improvement were members. The usual result followed: the clinical clerks were soundly abused for having ventured to impugn the management of the Infirmary; but in the meanwhile the defects complained of were remedied, and many useful improvements resulted from the inquiry.

The Edinburgh University has the merit of having been the first in this country to give due attention to clinical teaching, and the designs of that body were most ably carried out by Dr. Home. That gentleman took great pains to have the clinical reports well kept, and the final results of the treatment accurately recorded. It is not too much to say, that from no part of his educational course did our student derive more benefit than from his clerkship under Dr. Home.

His duties as clinical clerk terminated at the end of the summer session, and during the autumn he had ample time, the University being almost deserted, for the prosecution of his experimental inquiry into the action of the bloodvessels, particularly in reference to their state during inflammation. Several hours of every day were at time passed by Mr. Hastings in a microscopical examination of the capillaries in the web of the frog's foot, inflammation having been artificially excited; and thus a large mass of facts was accumulated, which he gradually reduced to order, so as to educe the numerical inductions. When it became his turn, by rotation, as a member of the Royal Medical Society, to prepare an essay to be read and discussed before the members, he took, as the groundwork of his paper, the experiments which had previously occupied so many months of labour. The essay, to which he had devoted all his evenings during the recess, also contained an historical account of previous microscopical investigations on the same subject. The sittings of the Medical Society, during this season, (Oct., 1817,) were particularly instructive and agreeable, and he received from the members a proof of the estimation in which he was held by them in being elected their President. This honour was the more gratifying as it was conferred by the unanimous vote of a very large meeting, which consisted of more than one hundred members; a circumstance which added to the *éclat* of a position which is at all times the most distinguished and responsible within the reach of a student in Edinburgh. In the early part of 1818, another attack of illness, brought on probably by the coldness of the season, threatened to suspend his studies, but fortunately Mr. Hastings recovered before being compelled to quit Edinburgh, and was able to resume his duties as President of the Society. When the night came round for reading the paper in which he had embodied the results of his experiments, the greatest interest was excited, and the debating room was thronged to excess. It is worthy of record, that among the large number of students present, many of them from America, the West Indies, and the continental states, there was not one individual who had made any microscopical experiments upon the subject under discussion. Incredible as this statement may now appear, it is nevertheless strictly true, and moreover the paper was attacked, and with no common eloquence, on the ground that microscopical observations were altogether inadmissible in pathological inquiries, that deductions drawn from experiments on the lower animals were very fallacious, and that such experiments were indefensible in themselves.

The author of the paper was not all disheartened by these illusory assertions; he felt an abiding conviction that his observations had been made with great care, and the conclusions faithfully drawn; and in his reply on the night in question, he said he was content to appeal to future times as to the accuracy of his statements. It was remarkable how, at this early age, he could so confidently maintain his single opinion, and could rest in faith on the verdict of succeeding days; but that confidence was neither presumptuous nor misplaced, for although numbers have since followed him in the same field of inquiry, we believe that his observations, and the conclusions drawn from them, have well stood the test of many a criticising investigation It was during the summer of this year that Mr. Hastings attended Professor Jameson's lectures on Natural History. They produced in his mind a strong desire to pursue those branches of science, particularly that of geology, to which his attention had been specially drawn by the Professor's geological excursions. This feeling never afterwards forsook him, and at a future period of his life led to wider results.

When Mr. Hastings' academical course drew to a close, and his examination had been duly passed, he chose as the subject for his thesis, "De vi contractili vasorum." His favourite subject was not adopted in vain; for when called up in due time to receive the doctorate, he was gratified by an announcement from the anatomical professor to the principal of the University, that the thesis contained much original investigation, and that it threw much light on our knowledge of the action of the bloodvessels.

Thus ended Dr. Hastings' academical career; but one incident in connexion with it remains to be told. In the summer of 1818 occurred the death of Dr. Gordon, an event which was followed by a burst of grief not soon forgotten in the University. Soon after the funeral, a friend of the family called on Dr. Hastings, and proposed to him to become Dr. Gordon's successor as Teacher of Anatomy and Physiology. The prospect thus opened for advancement in this celebrated medical school was very inviting, but after due deliberation the offer was declined. The state of Dr. Hastings' health at this period of his life was most delicate, and the winters of the north had proved very trying to his constitution. Moreover a vacancy had then occurred in the office of Physician to the Worcester Infirmary, and he thought that if he could obtain this object of his ambition, he might be able to succeed in his profession in his native county. These circumstances, taken altogether, determined him to quit Edinburgh, which he had fondly loved, and to commence practice forthwith at Worcester.

He accordingly settled in that city in 1818, and in

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the autumn of the same year was elected Physician to the Hospital. This was an office particularly suited to his taste, for while house-surgeon he had become attached to the institution, and was desirous of seeing every practicable improvement carried out. He has now for nearly thirty-three years zealously discharged the duties of his office, and during that period he has had the gratification of seeing many important improvements adopted in the establishment, more especially in the enlargement of the edifice, which has been made more commensurate with the wants of the sick poor in the locality. Medical officers attached to such institutions have often great difficulties to contend with, arising from the governors not being sufficiently alive to the importance of ample space, ventilation and cleanliness in the wards. This was formerly the case with the Worcester Infirmary. Several influential governors, particularly the late Bishop Cornwall, were so bent on accumulating capital, that they made the benefit of the patients a secondary consideration, and refused to make necessary improvements and alterations in the building. But a more enlightened management now prevails, extensive additions have been effected, and the institution, which accommodates 100 patients, is inferior to few in the provinces.

The practice of the Infirmary gave Dr. Hastings continual opportunities of observing disease; but his private practice was at first small. During the first year he devoted much time to revising his experiments on the bloodvessels, and collecting materials for a work on inflammation of the mucous membrane of the lungs. A large proportion of these materials was obtained from the records he had left of cases which had come under his notice as house-surgeon, and the rest from his daily observations in the Infirmary; for owing to the glove trade and other causes, a large proportion of the pulmonary cases in Worcester are affections of the mucous membrane. Dr. Hastings was induced to take up this subject from seeing that up to that time little distinction had been made between bronchial affections and other diseases of the lungs; and Dr. Badham's work, though useful, was not sufficiently extensive. His own experience, by the repeated attacks of bronchitis to which he had himself been subject, had probably assisted in turning his attention that way; and he was moreover strongly urged to investigate the subject by Dr. Wilson Philip, who thought that such a work was much required. Thus encouraged, Dr. Hastings persevered in his enterprise, and in 1820 the work was published, under the title of "A Treatise on Inflammation of the Mucous Membrane of the Lungs," to which was prefixed "An Experimental Inquiry into the Action of the Bloodvessels," and also "An Inquiry into the Nature of Inflammation." This production was very favourably received, and the whole impression was sold in little more than a twelvemonth. A second edition has been often asked for by the booksellers, but the diseases of the mucous membrane have been since so fully gone into in the writings of Dr. Watson, Dr. Williams and Dr. Davies, that the author has not thought a republication either necessary or desirable.

After three years' residence in Worcester, Dr. Hastings found himself gradually getting into practice, and his advancement was rendered more rapid by the determination of Dr. Wilson Philip to enter upon the wider field of London practice. This step was taken in 1821, and Dr. Hastings' engagements now increased so fast, that in 1823 he thought himself firmly established in his profession, and in that year he married the eldest daughter of George Woodyatt, M.D., then a physician in high repute at Worcester. This connection has been the source of much happiness to the subject of our memoir, and by it he has issue, one son and two daughters. Dr. Woodyatt did not long survive the marriage of his daughter, but died in the prime of life, in 1824. He was much esteemed as a practical physician, and was connected by marriage with some of the first families in Worcestershire and Herefordshire, so that his death was naturally the means of extending still further Dr. Hastings' practice. From this time forward, indeed, he found himself in the receipt of a large income, and was proportionately called upon to undergo great mental and bodily labour. Fortunately, his health, which had been hitherto so delicate, now wonderfully improved, and for nearly thirty years he has borne the fatigue and anxiety of an extensive country practice without suffering from it. In 1827 he was accidentally thrown from his carriage, and received a serious injury in the hip, which for three weeks confined him to his bed, and obliged him to go upon crutches for nearly twelve months. This, however, had scarcely any effect in diminishing his practice, and for some years he gradually recovered, though he has never since walked quite upright. After Dr. Hastings became engrossed in his large practice he was sensibly impressed with the baneful influence upon his mind of the tendency to degenerate into a mere receiver of fees, and of the science to sink into the trade of the profession. On looking round he could find no institution in the provinces to engage the attention of a cultivator of medical science. True it was that many great stars had shone in the provinces, and had thrown much light upon medicine, but the profession as a body was disjointed, and no attempt had ever been made to give to provincial medicine a local habitation and a name. After revolving this frequently in his mind, he resolved at any rate to make an attempt to remove the stigma, and his first effort was in the form of a quarterly periodical called *The Midland Medical and Surgical Reporter*, the first number of which was published in 1828. Dr. Hastings was joined in this undertaking by several esteemed friends; and in the prospectus conjointly published by them they say:—"We live in a busy age. In no former time has so much intellectual activity been displayed. The cultivators of medical science have eminently distinguished themselves in the general pursuit of knowledge. In this kingdom, however, great as have been the efforts made, the medical periodical publications have been almost entirely confined to the three great capitals, London, Edinburgh, and Dublin. The provinces have had no share in the pursuit, or at least only so far as the journals of the capital have derived support from the contributions of country correspondents. In reflecting on the state of medical science, and on the aid which it has derived from the opportunities of observation afforded by congregating the sick in hospitals, it has often struck us with surprise that so little should be known of the many interesting cases occurring in provincial hospitals. If, from the establishment of these institutions, faithful records of the valuable cases that have occurred in them had been handed down to us, our present limited knowledge of morbid anatomy, the only correct elucidation of disease, would have been greatly extended."

The effect of this appeal was to create considerable interest in behalf of the new periodical, and for four years it was carried on with much zeal and no small success. During this period Dr. Hastings contributed many essays to its pages, and amongst others may be noticed a communication on the Medical Topography of Worcestershire, including a history of the Infirmary, and several papers on Affections of the Lungs. This work brought him into literary communication with many of the most distinguished medical men in

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the provinces, and a wish became pretty generally expressed, that some means should be devised to bring into more friendly and harmonious connection the great body of provincial practitioners. About this time an event occurred which entailed on the editors of the *Midland Reporter* the necessity of making some alterations in their plans. This arose from the mercantile failure of their London bookseller; and as some change was of course imperative, it was determined, after an extensive correspondence with the supporters of the journal, to adopt a plan more comprehensive in its nature, and having further ends in view. Accordingly, in May, 1832, the editors made the following announcement:—"The present number completes the third volume of the *Midland Reporter*, and with it the work under the above name will terminate, as the editors can now congratulate themselves and the public on having attained the great object which they contemplated at the commencement of their arduous undertaking. Their appeal to the public spirit, generous feelings, and pure love of science, which so extensively prevail in, and dignify our noble profession, has not been made in vain. A wish has in consequence been warmly expressed, and widely circulated, that the members of the profession residing in the provinces should unite themselves into an association, *friendly* and *scientific*: that this association should have for its main object the diffusion and increase of medical knowledge, in every department of science and practice; and that the valuable contributions of members should from time to time appear in the shape of the published memoirs of the society. The subjoined prospectus will afford to our readers more minute information upon this truly gratifying topic."

The directing of the labours of the provincial profession from the support of a periodical to the formation of an association, was a work requiring wise counsel and energetic action; while the drawing up of the rules for governing such a body, called for grave deliberation. In order to obtain advice from those fully capable of directing in such an emergency, Dr. Hastings corresponded with most of the leading medical men in the provinces, and derived from many most valuable assistance. To no one was he so much indebted, on this occasion, as to the late Dr. Barlow, of Bath, who revised all the rules, and made most important suggestions.

The principal objects for which the association was formed were summed up as follows:—

First.—Collection of useful information, whether speculative or practical, through original essays, or reports of provincial hospitals, infirmaries, or dispensaries, or of private practice.

Secondly.—Increase of knowledge of the medical topography of England, through statistical, meteorological, geological, and botanical inquiries.

Thirdly.—Investigations of the modifications of endemic and epidemic disease in different situations, and at various periods, so as to trace, as far as the present imperfect state of the art will admit, their connexions with peculiarities of soil or climate, or with the localities, habits, and occupations of the people.

Fourthly.—Advancement of medico-legal science, through succint reports of whatever cases may occur in provincial courts of judicature.

Fifthly.—Maintenance of the honour and respectability of the profession generally in the provinces, by promoting friendly intercourse and free communication of its members, and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession.

Such being the objects to be attained by the Society, it became necessary to lay down the laws and regulations by which they might best be prosecuted. A code was accordingly framed, and extensively circulated among the provincial profession, and thus a well-digested preparation was made previous to any regular meeting. Nothing, however, was finally arranged until a general meeting was called by public advertisement, to be held at the Worcester Infirmary, on the 19th day of July, 1832, at which all legally qualified members of the profession, resident in the provinces, were requested to attend. On that day a large assembly of eminent individuals took place in the board-room of the above named institution; and in order to stamp upon the proceedings as much respectability as possible, the venerable Dr. Johnstone, of Birmingham, who had then practised the profession with unsullied honour for more than half a century, was unanimously called upon to preside. The utmost cordiality and unanimity reigned, and the Provincial Medical and Surgical Association was formed; a provisional constitution for one year was agreed upon, founded on the most liberal basis, of which the principle of representative government was made the distinguishing feature. On this occasion Dr. Hastings delivered an inaugural address, which was published in the first volume of the *Transactions*, developing the objects and prospects of the Association; amongst other portions of the plan he announced that an annual meeting would be held in the various principal towns of the kingdom, at which addresses would be read on scientific subjects. A president, a council consisting of members of the profession residing in the provinces, and two secretaries, were elected as the officers of the society; Bristol was fixed upon for the place of meeting in 1833, and the venerable Dr. Carrick was chosen president elect.

In a few months the first volume of *Transactions* was published, and members from all parts of the kingdom joined the Association, so that the number, at the time of the meeting at Bristol, was 316. On this occasion, which was justly considered as quite an epoch in the history of provincial medicine, the constitution agreed on at Worcester, which had been found to work admirably, was confirmed, without any alteration; a fact which augured well for the future prosperity of the Society. These anniversary meetings have since been successively held at Birmingham, Oxford, Manchester, Cheltenham, Bath, Liverpool, Southampton, York, Exeter, Leeds, Northampton, Sheffield, Norwich, Derby, Bath, Worcester, Hull, and Brighton. They have all been largely attended by provincial practitioners, and some of the most eminent of their metropolitan brethren, so that year by year the interest in these gatherings has increased, rather than been lessened, as was shown by the unabated zeal exhibited the last two years, in the *réunions* at Hull and Brighton. It must be added, that on every occasion the twofold object of a friendly and scientific assembly has been admirably sustained. Another object of the Society was to become through its publications a medium of communication of valuable information, and it was accordingly agreed to publish Memoirs, which have been ever since continued. For several years a volume of *Transactions* was published annually; but as the number of members increased, it became apparent that such a medium would not be sufficient for their requirements. A weekly publication was consequently issued, in the year 1840, called the *Provincial Medical and Surgical Journal*, the editors of which, Dr. Green and Dr. Streeten, aimed to make it the journal of the Association, though it was not at first exclusively devoted to that body. This was continued for three years, at the expiration of which time it was thought desirable that a journal should be published by the Association itself, and that there should be

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paid editors for that purpose. Accordingly, the late Dr. Streeten, assisted by Dr. Ranking, of Norwich, edited the journal to the time of his death, in 1849; after which, Dr. Ranking, and Mr. Walsh, of Worcester, were appointed conjoint editors of the publication, which is issued from the Worcester press every fortnight.

There was also another object of paramount importance, which was soon taken up by the Association —that of the organization of the profession. Dr. Hastings, in his inaugural address, had freely stated that the whole system of medical polity, in this country, was defective and erroneous, and that the subject of its contemplated improvement was closely connected with that of the advancement of the science. The first committee of the Association formed to give consideration to the subject, was at Cheltenham in 1837; and they were directed to report to the council such measures as circumstances might from time to time render expedient. Under their direction, successive memorials to Government, petitions to Parliament, and deputations to members of the House of Commons, were sent, urging upon them the necessity of giving early attention to the state of the medical profession; and certain principles were adopted as those on which any measure of its regulation should be based. These were—first, uniformity of the primary qualification, to be tested by sufficient examination; secondly, equal right for every member of the profession to practise throughout her majesty's dominions; and thirdly, the adoption of the representative system in the formation of the councils or governing bodies.

From these principles the Association have never swerved, and they are those for which they are still contending. The last occasion on which they were brought prominently forward was in the spring of 1850, when Dr. Hastings presented a memorial to Sir George Grey, embodying the sentiments of the Association as collected at the district meetings of all its branches, where resolutions had been unanimously adopted.

Dr. Hastings' attachment to the Society has been uniform and unvarying, and he has never once been absent from the anniversary meetings. At the first meeting at Worcester he was appointed joint secretary with Mr. Sheppard, and held that office till 1843, when he was at length compelled to relinquish it, owing to the additional labour entailed on him by the increased numbers of the Association, and which were greater than he could discharge in connexion with his extensive professional avocations. On the occasion of his retirement, the Society, in order to mark their sense of his services, appointed him permanent president of the council and treasurer. At several other times the members have given him signal proofs of their regard. At the Liverpool meeting, in 1839, his portrait was presented to his wife; and in the year 1850, during which Dr. Hastings filled the office of President of the Society, representations were made to Sir George Grey by many of the most influential members, which resulted in her Majesty's conferring upon him the honour of knighthood. Nor have the honours paid to Sir Charles Hastings been confined to his own country; many distinguished men of continental Europe and the United States of America are enrolled in the lists of the Association, and from a medical society in the latter country he received some years since an honorary diploma.

Sir Charles Hastings has extended his exertions beyond the range of his own profession, and has shown himself in various ways the steady advocate for the diffusion of useful knowledge. In the first volume of the *Transactions* of the Provincial Medical and Surgical Association, Dr. Conolly had published a proposal for the establishment of County Natural History Societies, for ascertaining the circumstances in all localities which are productive of disease or conducive to health; and he added some eloquent sentences on the advantages which would flow from provincial museums. Moved by this appeal, a few individuals combined together, in 1833, to form a Worcestershire Natural History Society, and Sir Charles Hastings entered with great zeal into the project. It may be said that it is chiefly owing to his great and persevering exertions that the enterprise has fully succeeded, and that the city of Worcester now possesses, at the cost of several thousand pounds, a splendid museum, which, both in itself and in the edifice which contains it, is inferior to few in the provinces. In 1834 Sir Charles published his "Illustrations of the Natural History of Worcestershire," a highly valuable work; and subsequently an account of the Salt Springs of Worcestershire, a considerable part of which latter production has been embodied by Sir Roderick Murchison in his "Silurian System."

Such is the history of Sir Charles Hastings up to the present time; and it remains only to add, as to his sentiments and feelings, that he has always been a strenuous supporter of the broad principles of civil and religious liberty, the principles of Burke and Hampden, as they are held and supported by the great party who founded and maintain them. Ardently attached, both by birth and education, to the Church of England, as established at the Reformation, he has been a constant attendant through life on her public services; and his veneration for her is increased by the conviction, that by holding out the right hand of fellowship to persons of all creeds who are engaged in carrying out the fundamental doctrines of Christian philanthropy, he is best complying with the tolerant spirit by which she is so nobly distinguished. It is hoped that his future life, as hitherto, will be passed in the pursuit of the profession which he has so ardently followed, and to which he is devotedly attached, in the county to which he owes the training of his childhood and the success of his maturer years. Finally, it may be remarked that Sir Charles Hastings has for a long period enjoyed the admiration and respect of all classes of his professional brethren.

Medical Benevolent Fund Society of Ireland—Newry Branch.—It is with gratification we publish the list of contributors to the Society, just now received (together with the amount) from Dr. Erskine, the active secretary of the Newry Branch. The list is highly creditable to that town. We would wish the example set by Newry were imitated by other towns of equal or greater resources. Limerick, Waterford, Clonmel, Galway, Londonderry, Drogheda, Sligo, Kilkenny, Wexford and other populous places, ought to have their local associations. Wherever such branches have been established, as in Belfast, Armagh, Cork and Newry, they have been found to work most beneficially. They strengthen the hands of the parent Society, by greatly increasing the contributions; and they benefit the locality still more, as it is a rule of the Society to bestow upon the applicants of each district at least as much as is received from it; and if the cases be urgent, a great deal more, out of the general fund, to which large additions are being made every year.

Societe de Biologe.—We have great pleasure in stating that Messrs. Joseph Maclise, the author of "Surgical Anatomy," and John Quekett, the Assistant Conservator of the Hunterian Museum, and author of a treatise on the Microscope, have been unanimously elected corresponding members.

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A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON, &c.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum, ei dissectionibus manifestorias, tum aliorum proprias, collectas habere et inter se comparare.—Morgagni. *De Sed. et Caus. Morb.*, lib. 14. Proœmium.

KING'S COLLEGE HOSPITAL.

Prolapsus of the Rectum in the Adult; Operation.

(Under the care of Mr. Fergusson.)

Those practitioners who frequently prescribe for infants and children, are fully aware how often these little creatures suffer from prolapsus of the rectum, especially where there is great laxity of bowels and much crying. Such cases are in general of slight importance, especially when carefully managed; but among the poor, who, unfortunately, are at the same time uncleanly and negligent, very distressing cases are met with. Transitory prolapsus of the rectum is likewise noticed when children are affected with stone in the bladder, and very few such patients are put on the operating-table without some rectal protrusion being noticed. But here the tendency to prolapsus disappears when the exciting cause—viz., the calculus—is removed.

In adult life, prolapsus of the rectum is much more rare; this is fully in accordance with the experience of Mr. Curling, who says, in his excellent monograph on the diseases of the rectum:—"All the worst forms that I have met with have been among the neglected children of the poor. Young persons generally outgrow this complaint by the period of puberty, and, common as prolapsus is in early life, it is very rare in young grown-up subjects."

When this affection attacks an adult, it is very frequently connected with the existence of internal hæmorrhoids, and the more these increase in size, uncontrolled and unarrested, the more is protrusion of the lower bowel likely to occur. When the piles are removed by the ligature, prolapsus will not take place; and the disease may, by the contraction produced by the ligatures, be completely cured, if already existing. In cases, however, where such a state of things has been neglected, matters may assume such a character as to necessitate an operation; and as the latter is but seldom performed, we shall just give a short sketch of a case of prolapsus, where Mr. Fergusson had recourse to the method generally recommended:—

Francis R——, aged thirty-eight years, of a fair complexion, nervous temperament, and who has led a very irregular life, had generally enjoyed good health, when, about seventeen years ago, he began to be troubled with hæmorrhoids. About twelve years since the patient first noticed that after much walking or straining at stool, a slight prolapse of the rectum would take place; but it is only within the last seven years that he has been severely inconvenienced by such protrusion. The patient had first applied to Mr. Bowman, who advised an immediate operation, but a great deal of unnecessary delay took place from the man's hesitation, and he was finally admitted under the care of Mr. Fergusson, June 1st, 1851.

On examination, much loose skin was found around the margins of the anus, and upon the patient straining, the bowel protruded to a considerable extent, the mass presenting a bluish and nodulated appearance from strangulation at the anus. Mr. Fergusson determined upon the excision of a great portion of skin around the anal orifice, with the hope that the contraction produced by cicatrization would greatly assist in keeping up the bowel; the patient was therefore brought into the theatre, June 7, 1851.

When he had been completely narcotized with chloroform, the rectum prolapsed to a fearful extent, the sphincter being completely relaxed by the general anæsthesia. The protruded parts were about the size of a man's fist, glistening, irregularly globular, bluish red from congestion and a sort of strangulation at the anus, and retained by loose folds of skin. Mr. Fergusson now proceeded to take up portions of the redundant skin with the vulsellum, and cut off with the scissors five triangular pieces of skin, the base towards the anal orifice. The bowel was then returned, the parts well supported and dressed with wet lint.

Mr. Fergusson stated that before the operation the sphincter could not act, from the great amount of loose skin around the anus; and that now there was much likelihood that cicatrization would produce a sufficient amount of contraction for the bowel to gain much support. He had performed the operation before with complete success; the radii of a circle produced by it around the anus, rendered that orifice smaller, and enabled it to guard against prolapse. It was, however, doubtful whether in the present case he had taken off a sufficient quantity of skin.

The patient progressed very favourably, though he experienced some pain; his bowels were gently kept open by emollient enemata, and in the space of about twelve days the orifice of the anus was much contracted, though some redundant skin was still existing in that locality. The improvement was steadily maintained, the bowel remained *in situ*, and the cure might have been perfected by the removal of some more skin, when the patient, who is of an eccentric disposition, left the hospital of his own accord.

Mr. Curling observes, in the work above alluded to, that this disease, when it affects adults, is more common in women than men. Child-bearing has of course much influence here. With men, however, "prolapsus of the rectum may be combined with internal piles, and such subjects are sometimes affected with enlargement of the prostate gland or stricture, and are accustomed to strain in passing water. This frequent forcing, as well as the habitual protrusion of the hæmorrhoidal folds, so weaken the sphincter, and relax the coats and connexions of the rectum, as ultimately to cause displacement and inversion of the bowel."

Mr. Curling mentions a case, under the care of Mr. Luke, in 1835, in which the same operation, as described above, was performed with very satisfactory results. The patient was "nineteen years of age, and had been troubled with prolapsus ever since she was three years old. Two oval portions of mucous membrane were excised from the verge of the anus; the sphincter immediately afterwards contracted strongly, and completely buried the wounded surfaces. There was some unexpected hæmorrhage in the evening, but the operation was quite successful in preventing further prolapsus."

Unsuspected Foreign Body in the Fore-arm.

(Under the care of Mr. Fergusson.)

"We lately witnessed an operation, performed by Mr. Fergusson, which strongly reminded us of a well-known rule in surgery—viz., When treating wounds, and especially those inflicted by projectiles, search thoroughly, after the first cleansing, for any foreign body which may lie within or adhere to the parts. When this rule is not strictly attended to, and the wound is allowed to cicatrize over an extraneous substance, be the latter ever so small, a low kind of irri-

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tation continues, and the constant pain and suppuration may easily lead to a wrong diagnosis. It is true that nature will often accommodate herself to various abnormal circumstances, but it will always be the safest course not to impose that effort upon her. The case runs as follows:—

Richard A——, thirty-two years of age, a strong, healthy-looking man, and a smith by trade, was admitted July 8, 1851, under the care of Mr. Fergusson. He stated that about eight months before he applied at the hospital, a splinter of metal, whilst he was at work, flew off, struck his left fore-arm, and made a wound about one inch in length. The hæmorrhage was considerable, and with difficulty arrested at the Infirmary. Since that time the wound had refused to heal, and when the patient was seen by Mr. Fergusson, there was a small suppurating ulcer on the inner part of the fore-arm, and another of a more recent date on the outer part.

On the 12th of July the patient was brought into the theatre, and Mr. Fergusson proceeded to make a sufficiently deep incision over the original wound, on the inner side of the fore-arm, where he suspected the existence of a foreign body. After a little dissection a piece of metal presented itself, and was extracted without difficulty. It was about the size of a shilling, rather irregular, and surrounded with indented edges. During the proceedings the radial artery was wounded. Mr. Fergusson tied the vessel above and below the solution of continuity; the wound in the arm was lightly dressed, and in about a fortnight it was quite cicatrized. The patient was then discharged in very good condition.

Epileptic Mania.

(Under the care of Dr. Todd.)

A patient affected with epileptic mania was lately admitted into this hospital, whose violence reminded us very strongly of the following passage in Esquirol's excellent work, "Des Maladies Mentales:"—"The fury of epileptic patients breaks out after the fit, rarely before; it is of a very dangerous kind, blind, and in some degree automatic. Nothing can tame it: neither the sight of powerful instruments of restraint, nor moral influence, which means generally succeed with ordinary maniacs. Their violence is so terrific, and so much dreaded, that I saw, in an asylum of the South of France, all the epileptic patients tied down to their bed every evening, so great was the apprehension they created."

It is unfortunately but too well ascertained that epilepsy, by the violent shocks which its attacks convey to the brain, is very frequently followed by a derangement of the intellectual faculties. Aretæus has mentioned the fact, and Van Swieten says, in his commentaries on Boerhaave, that he had seen many patients who had been deranged from their childhood, after frequent epileptic fits. But there is a variety to which Dr. Todd's patient belongs, marked by no aberration of mind, and which is distinguished by an attack of furious madness after each fit; the peculiarities of this variety being regularly transmitted from sire to offspring.

Facts pointing to hereditary transmission are not wanting; we see them in various kinds of diseases and peculiarities, and especially in the different abnormal states to which the nervous system is liable; and yet we find that so observant a man as Tissot disbelieved hereditary influence; this doubt was also raised by Dousson, Dubreuil, &c., whereas Saillant, Maisonneuve, Hoffman, and Esquirol, fully believe in the transmission here spoken of. The example we have this day to adduce, as seen at King's College Hospital, will illustrate in a very positive and sad manner how plainly and distinctly the fearful disease and its peculiarities pass from parent to child. The case offers, however, an exception to a rule observed by Esquirol—viz., that epilepsy is more frequently transmitted *by the father* than by the mother, the reverse generally happening with ordinary alienation of mind. The following details are derived from the notes of the clinical clerk, Mr. Maurice Davis:—

Samuel D——, aged twenty-nine years, a contractor, married, and without family, was admitted under the care of Dr. Todd, Sept. 30, 1851. From his birth to his twenty-first year he was subject to an eruption on the crown of the head, which discharged copiously, and which sometimes formed a thick yellow crust (porrigo?) This affection defied all therapeutical means for a number of years, but when the patient had reached the age of twenty-one, it healed spontaneously. Soon afterwards he began to suffer from severe headache, both in the temples and vertex, the latter locality having been the seat of the eruption. The pain made him giddy, and reel as if intoxicated; the paroxysms lasted about half an hour, and returned at the changes of the moon. As the patient grew older the attacks became more severe and more frequent.

The first time one of these severe attacks occurred, he was in a cart, turned giddy, fell, and carried with him several pieces of timber. Some of his ribs were broken, and the patient was taken in a state of unconsciousness to the Westminster Hospital. Another time he fell down among some horses he was feeding, and received from one of them a kick in the abdomen, which injury causes, even now, pain in the part. He had several fits afterwards, from which he suffered more or less injury to bones, &c. The attacks did not recur for a whole year, but with the last fit he, for the first time exhibited violence, and this took place five years before the present inquiry.

The patient now married, and soon afterwards had a fit, after which he was so violent that six policemen could hardly hold him. An attack subsequently occurred whilst the patient was in bed, and in this circumstance, as had been the case in several others, the violence abated when his head was tightly bandaged, and vinegar applied to the temples. The paroxysms, always accompanied with much violence, followed each other at about three months' interval; and they were now marked with extreme pain in the head, both in the temples and vertex. During the fits he is unconscious, raves, and makes repeated attempts to bite and otherwise injure those around him.

The patient's mother was affected with the same kind of fits from her birth, and they increased in severity as she grew older. She was quite as violent as himself, and in one of these fits, which confined her to her room for six weeks in a state of incessant and violent mania, she died at the age of thirty-five, eleven years ago. She was the eldest of her family; her mother and two of her sisters had died of the *same kind of fits*. One of her aunts was living a year ago in Bethlehem Hospital, affected in an analogous manner. The uncles and aunts are quite well.

The patient is the eldest son, and has two sisters, who are both in perfect health. The brain of the mother was examined by Dr. Hastings, who reports it to have been (the patient states) full of corruption.*

When the patient whose case we are relating felt any premonitory symptoms, he did not retire to rest with his wife, for fear of doing her harm: and he has of late, when thus left by himself at night, gone out,

* Morgagni examined the brain of a woman who had had epileptic fits for two years. The anterior third of the left hemisphere was considerably sunk and extremely soft.

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and wandered about in an unconscious state, until he found himself in some strange place, recovering from a fit. On the 30th of August, the day of his admission into this hospital, he went out for the purpose of conveying implements into the city; but after reaching Whitehall, he was probably seized with a fit, for he has no recollection of what passed afterwards, until he found himself bound to his bed on the morning of the 31st. The patient had been brought on a litter by two policemen, in a most violent state, raving and struggling to free himself, crying with pain and begging the bystanders not to knock his head, within which he seemed to be suffering excruciating agony. When the paroxysms somewhat subsided, he endeavoured to bite anything in his way—his garments, or even his own hands—his eyes being bloodshot, and pupils dilated.

Chloroform was offered him for inhalation; he took it very readily, and was soon under its influence; and while in this state the pupils became more freely dilated. He remained quiet, and appeared to sleep comfortably for about twenty minutes. After this time he recovered his consciousness, and answered questions rationally. He would now and then, however, have fits of violence; and since he by experience felt the approach, he would warn the bystanders of their recurrence.

As he could not answer for his own rational behaviour, he was pinioned to the bed whilst the pain and fits alternated. The nature of the fit which occurred before his admission could not be well ascertained. Whilst being carried on the litter, the violent pain was suddenly arrested by accidental pressure being applied to the patient's temples; when this was discovered, a bandage was tightly placed round the head, and pads on the temples, with very good results. The patient states that by these means he could always stop or alleviate the paroxysms in his mother when the latter was seized in his presence.

On the next day, he had a sensation of weight at the temples, but experienced relief from the ice which had been placed on his head. On the third day he was walking about in the ward, and slept well until three o'clock next morning, when his head began to ache severely, and he started up, but could not release himself. The pain in the head continued for the two following days, but was greatly relieved by the tight bandage around the temples; he was in the meanwhile taking quinine. On the seventh day he had a very good night, but when he first awoke he could scarcely see for a few minutes, and said that he felt as if he had had a skin before his eyes, especially the left. The patient has had an attack of gonorrhœa, for which lotia-plumbi injection was used; he had here and there fits of headache, but no actual epileptic seizure, and was discharged on the 10th of September, 1851, eleven days after admission.

Such cases as the above are of rare occurrence, and the circumstance is so much the more fortunate, as the disease, especially when caused by heredity, is acknowledged as incurable. In fact, Esquirol says, "When epilepsy has been transmitted by heredity there is no cure for it." The development of the disease, occurring upon the cure of scald-head, is worthy of notice, though such coincidences have frequently been noticed. It has been observed that the metastasis of a cutaneous eruption, the healing of an ulcer, or the cessation of an habitual evacuation, has given rise to epilepsy. Dr. Maisonneuve (1803) mentions a boy of nineteen, who cured himself of porrigo on the head with cold water, and became epileptic a few days afterwards; and Cartheuser noticed, that in Sweden epilepsy often was the consequence of the removal of tineæ capitis with cold water, a remedy frequently used for such cases in that country. Would, with Dr. Todd's patient, the hereditary influence been kept at bay if the scald-head had been allowed to continue?

The advantages of pressure around the cranium, which were manifested in this case, deserves a moment's attention: that it invariably diminished the intensity of the fit is quite clear, but how did the pressure act? Was it by counteracting the probably soft state of the encephalon, or by preventing the too rapid influx of blood upon the brain? Whatever may be the *modus operandi*, the fact is worth noting; and as vinegar and ice also alleviated the pain and diminished the violence, one is tempted to inquire what effect complete congelation, according to Dr. James Arnott's plan, would have had; the more so as this freezing method has been known to be very efficient in headache.

We would, finally, draw attention to certain statistics which show what proportion of epileptic patients suffer in their intellectual faculties, and to which varieties of alienation they are liable. The numbers were collected by Esquirol, and they refer to women, who, according to this author are more numerous than men in epileptic wards by one-third. He considers that the larger number of women (and children) is due to the greater delicacy of their nervous system. Out of 325 females suffering from epilepsy at the Salpetriere, at the time of M. Calmeil's superintendence, 46 were hysterical, 12 were attacked by monomania, 30 were maniacs with a propensity to suicide, 34 had fits of maniacal fury, (with 3 the violence only broke out after the fit;) 145 were in a state of dementia; of these there were 16 who had no lucid moments at all, whilst the rest fell into dementia only after the fit, and 2 had then paroxysms of great violence; 20 had weak memory and a tendency to dementia; and 60 enjoyed the full use of their intellect, but were peevish, given to fits of anger, &c. Thus it will be seen that four-fifths of all the above-mentioned patients were more or less deranged.

We took, a little time ago, a lively interest in a case of dementia connected with epilepsy, under the care of Dr. Babington, of Guy's Hospital. The patient was a very good-looking little boy, whose history we would fain subjoin, but we are obliged, in order not to outgrow our limits, to postpone it to another "Mirror."

ST. BARTHOLOMEW'S HOSPITAL.

Ununited Fracture of two years' standing; union promoted by the insertion of Ivory Pegs.

[Under the care of Mr STANLEY.]

If we might be allowed to judge from the facts which come under our notice in the hospitals of London, we should be inclined to say that cases of ununited fracture have for the last few years been very rare. This opinion might be looked upon as pretty correct, when it is remembered that cases of that nature, when they do occur, are very likely to be seen in our large hospitals, as it is to those institutions that patients with pseudarthrosis generally repair from the country. When there is any palpable disease of the bone, or the constitution is impaired by syphilis, scrofula, the carcinomatous diathesis, &c., it is easy to understand how it happens that nature is unable to make the usual and normal efforts which so beautifully mark the consolidation of fracture; but when the patient is enjoying good health, when every precaution has been taken for keeping the fragments in apposition, and it is pretty certain that no piece of dead bone, muscle or fibrous band, is keeping the fragments asunder, non-union becomes very difficult of explanation.

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Such cases do, however, here and there occur; and we had ourselves occasion to put one upon record in THE LANCET, as treated by Mr. Fergusson at King's-College Hospital. Here none of the usual causes of non-union could be discovered; and the same obscurity reigns touching the case under the care of Mr. Stanley, which we are about to relate.

Instances of this kind, though few, are calculated to impress strongly upon all practical men the necessity of watching patients with fracture, so as to ascertain whether the fragments are really and truly in apposition, and whether the patient's diet, general health and moral disposition are such as are desirable for promoting union. There can hardly be a doubt but that the care bestowed in our days upon all the details connected with the treatment of fracture is mainly instrumental in the rarity of ununited fracture. When, however, pseudarthrosis is unfortunately confirmed, it remains for the surgeon to make a choice of the various means which have been proposed to promote union.

The practitioner will, of course, according to a principle generally adopted, commence with the least hazardous line of treatment, and gradually use severer means as the milder ones have failed. Thus will blisters, pressure, rubbing, rough motion, acupuncture, the seton, caustic applications, &c., be used in turn, till the surgeon is fairly driven to the end of his store. The last resource, viz. resection of the fragments, is on the other hand so fraught with danger, that surgeons have eagerly seized upon the method advocated by the late Dieffenbach. This method consists, as is well known, in introducing ivory pegs into the ends of the fragments, the irritation caused by their presence having for its results the throwing out of a callus.

Dieffenbach had been led to adopt this method (which he put into practice with good success) from noticing that a bullet lodged in bone occasioned the throwing out of a large quantity of osseous substance. It is thus again seen (if any proof were necessary) how much we gain by observing the workings of nature, both in a physiological and pathological respect. The results attending the adoption of this method have been varied: we are happy to say that in the present instance the success has been complete, and we at once proceed to narrate the case.

Abraham B——, aged twenty-four, a healthy looking countryman, employed in the construction of railroads, and not addicted to excessive drinking, was knocked down by a horse two years before his admission. By this accident he suffered a compound fracture of both bones of the right leg, towards the lower third, and the violence was so great that the upper fragment was forced through his Wellington boot. The patient was placed under surgical care at Slough, and the reduction was effected with much trouble, a whole hour of strenuous efforts having been necessary for accomplishing it. The limb was put up in splints for two months, and in Simpson's patent apparatus for four months, but no union took place, though the wound had readily healed.

The patient now left the hospital to recruit his health in the country; he contrived to do light work in Devonshire, with pseudarthrosis of the leg; and succeeded in lessening the inconvenience of this state of things by making for himself an apparatus composed of iron hoops and a connecting rod. Thus he went on for eighteen months, and was finally advised to apply to Mr. Stanley, under whose care he was admitted Oct. 7, 1850, two years having elapsed since the time of the accident.

On examination, the fractured portion of the limb allowed of extensive motion, a false joint had been formed, and the patient stated that he felt a grating at every step he took. Mr. Stanley first tried blisters for a month, then splints and various other contrivances (among which was a casing formed of gum and chalk) for keeping the fragments in apposition; but these were of no avail, and union did not take place. The patient now returned into the country; after a short stay, during which his general health improved, he was re-admitted.

On Feb. 16th, 1851, Mr. Stanley decided upon driving ivory pegs into the extremities of the fragments, according to Dieffenbach's method. The patient was placed under the influence of chloroform, and a flap of integument over the fracture having been reflected, Mr. Stanley bored four holes with an instrument of the class of drills made for the purpose, two on the upper and two on the lower fragment. Into these holes four ivory pegs were inserted, or rather hammered, with nearly a quarter of an inch of the peg remaining over the surface of the bone. The flap was then replaced, and the patient's leg put into a fracture-box.

Inflammation ran tolerably high, suppuration was soon established, without constitutional disturbance, and the pain was very trifling. Three days after the operation a small abscess formed on the upper part of the flap; Mr. Stanley opened it, and a fortnight afterwards something was seen projecting from the wound, and when pulled out it proved to be one of the pegs. The flap now cicatrized, and two months after the operation Mr. Stanley proceeded to remove the remaining pegs, the soft parts having been laid open for the purpose. It was found on examination that the portions of the pegs which had been above the bone was quite unattacked, whereas the part which had been imbedded in the osseous structure had nearly disappeared. (See the annexed engraving.)



Mr. Teale, of Leeds, (who has performed the same operation successfully,) has remarked analogous phenomena respecting the unaltered state of the upper part of the pegs, and the almost complete absorption of the part situated within the bone, the whole peg having pretty well the same appearance as the milk tooth of a child with the fangs nearly absorbed.

On May 13th, three months after the introduction of the pegs, the patient had a sharp attack of erysipelas of the leg; this was arrested by the usual remedies, and a circle of nitrate of silver on the upper part of the limb. The fracture was now approaching consolidation; but Mr. Stanley desired the patient not to use his limb for some weeks, and when the latter began to try the limb, about four months after the operation, the fracture was found perfectly united, firm and immovable. He continued in the hospital, carefully walking on crutches, for another month, and was discharged in the latter end of July, 1851, with a sound leg, about five months after the operation.

Dieffenbach's method has also been applied by Mr. Bowman, at King's College Hospital, in a case of a very interesting kind. We shall have much pleasure in acquainting our readers with the results, as soon as they are of a decided nature.

Before dismissing the subject, we would mention that acupuncture in cases of ununited fracture has

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here and there been very successful; and as this measure is not so severe as the *pegs*, we shall quote from the second volume of the "Mémoires de la Societe de Chirurgie de Paris." (1851,) a paper by M. Lenoir, of a case of ununited fracture of the femur, in a man thirty-three years of age.

The patient had been fifty-three days under treatment at La Pitié, and the callus had been satisfactorily thrown out; but the surgeon, M. Berard, (1845,) desirous of overcoming the stiffness of the knee-joint after the man was already getting up, subjected it to passive motion, and in one of these manœuvres the callus gave way, and henceforth refused to form again.

M. Lenoir saw the patient four months after the accident. He first resorted to rubbing the fragments, starch bandage, and continuous extension; these means yielded no result after two months' treatment. The author had then recourse to acupuncture, discarding resection of the fragments, the ligature with a metallic thread, and the seton as too hazardous. The limb was placed in a box, where extension could easily be made. Seven months after the original accident, four needles, four inches in length, were thrust along the internal surface of the superior fragment, and were left six days. Some inflammation was then excited; the needles were withdrawn, put in again a little higher up, and left five days. After this the fragments were approximated, and kept closely connected by little splints placed round the limb and secured with straps. Extension was made very gently at first, and the surgeon visited his patient *every day* to regulate both the extension and the pressure by the splints.

After twenty-three days some firmness was noticed between the fragments, and in thirty-five days consolidation had taken place. Œdema of the thigh and leg were combated by the proper means for a fortnight; and after careful trials with the crutches, &c., the patient walked out, about six months after the implantation of the needles, with less than an inch shortening.

M. Lenoir justly says: "Wherever the seton is indicated, acupuncture can be substituted with advantage; for the latter acts like the seton, but more gradually, and may be more easily regulated and controlled." Whenever the extremities of the fragments are in a diseased condition, or separated by a splinter, muscle or a fibrous cord, resection is of course called for. It is strange that M. Lenoir does not make any mention of Dieffenbach's method in the paper of which we have just offered an abstract.

Strangulated Inguinal Hernia; Operation; Acute Peritonitis; Death.

(Under the care of Mr. STANLEY.)

Notwithstanding the numerous and valuable works which have been written on hernia, and the excellent advice to be obtained from clinical teachers and lecturers, practitioners do not seem sufficiently impressed with the mischief done by prolonged taxis; and it is really astonishing that such a method as Amussat's, which advocates no less than subjecting the hernial tumour to continual pressure and kneading for days together, should ever have found any favour. We are fully aware of the hazard connected with an operation by the knife, but we very much suspect that such operations would more frequently have a successful issue, if such a distressing amount of violence were not previously offered to the strangulated portion of intestine.

It would appear that now, with the wonderful anæsthetic agents at our command, a great deal of the difficulty connected with the subject is removed; for it is plain that a hernial tumour, which cannot by gentle manipulation be reduced whilst the whole frame is in a state of relaxation, and the mind unconscious, need not any longer be subjected to the taxis. In such cases it would be advisable to apprise the patient beforehand of the nature of the affection, and agree that the knife shall be used whilst the unconsciousness lasts, if the tumour do not yield to the taxis after narcotism has been established. In this way patients would be saved the pang of the alternative generally left them; and the bowel not being roughly handled the case would be more likely to turn out favourably.

It may of course be objected that some herniæ have been reduced after two and three hours' effort, and that the patients have done well; but against the few instances where matters have thus proceeded, hundreds might be mentioned where irreparable injury was done long before the cutaneous incision was made. The operation for strangulated hernia (especially where the sac is not opened) is not after all so formidable a matter; for when the hernia does not present any tenderness, when the strangulation has not been too prolonged, when the protruded parts are not too voluminous, and the patient is in an average state of health, there is every probability, provided the operation is well performed, that the case will do well.

But in hospitals, patients generally apply very late, when repeated efforts at reduction have already been made, so that some elements of success are wanting. Surgeons in the country generally have excellent opportunities of operating under favourable circumstances, for they generally see the cases early and have not to lament previous attempts at reduction. It is extremely likely that the necrologue of the affection with which we are now occupied would be far less considerable, if the general rule were established to give chloroform immediately after gentle taxis has failed, than to continue for a very short time the efforts at reduction, whilst the patient is insensible, and operate before the anæsthesia has gone off, if the tumour prove irreducible. Indeed chloroform combines the advantages of venesection, tobacco, the warm bath, tartar-emetic, &c.; the only substance which can in some degree cope with it is opium. Nor do Desault's words lose any of their value by age—"Think favourably of a hernia which has not been handled before the operation." The following case will be found a good illustration of the subject under discussion; the details might be kindly furnished by Mr. Savory, tutor at St. Bartholomew's Hospital.

William T——, aged twenty-nine, was admitted into Bentley ward, March 15, 1851, at seven in the evening. The patient is a pale, ill-nourished man, who presents in his right groin an inguinal hernia; he has, besides, an enormously distended scrotum, and an œdematous penis. A distinct impulse is communicated to the swelling by coughing, but no effect is produced by such expiratory efforts on the scrotum. The herniated intestine can be returned into the inguinal canal, and two fingers may be pushed under the outer column of the external ring, but on withdrawing the finger the tumour immediately protrudes again; the abdomen feels natural, and there is no pain about the swelling. Pulse 110, rather small and sharp; tongue moist, and covered with a white fur.

The patient is a baker by trade, and has had a hernia since he was nine years old: the displacement had originally been caused by a kick, and he has generally been able to return the hernia, though a hard lump sometimes remained. The man habitually wore a truss; the night before his admission, however, whilst in bed, the hernia descended, after he had had a fit of coughing; he was unable to return it, and a good deal of pain in the part and vomiting supervened.

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A surgeon who was sent for attempted the reduction by the employment of taxis, which was used for half an hour; this seemed partially successful, but the vomiting continued through the night and the next morning. The bowels had been relieved on the previous day, before the sudden descent of the hernia.

Mr Stanley saw the patient on the evening of his admission, and considered the case to be an inguinal hernia of the right side, with œdema of the scrotum, which latter circumstance was probably owing to the employment of the taxis. Mr. Stanley did not consider that the symptoms were such as to require immediate operative proceedings; he determined to wait till the next morning, and ordered a good dose of calomel and jalap. The patient had taken castor-oil twice before admission without effect.

On the following day there was pain in the swelling; the scrotum was livid, more tense, and seemed equally distended, as the raphe had retained its median position. Nothing like intestine could be felt in it, and no more impulse on coughing than on the previous day. It was suspected that blood, effused through the efforts at taxis, was filling the scrotum, and though uncertainty prevailed as to the cause of the distention, it was clear that an operation was now imperatively called for, as all the previously mentioned symptoms were becoming worse.

When the patient had been rendered insensible by chloroform, Mr. Stanley dissected in the usual way down to the sac, opened the latter, and thereby gave exit to a little clear fluid. The intestine looked healthy, but much congested; and when it was brought into view, it was found continuous with a mass of intestine in the scrotum about *six feet* in length. The bowel was supposed to be distended with air, and some difficulty was experienced in returning it. It was therefore found necessary to make a small puncture into the intestine, to allow the escape of air; but instead of air, fluid spurted out. A small trocar was then employed, and a certain amount of light-coloured, flaky liquid was drawn off. It consisted of serum and mucus, and did not contain the slightest trace of bile or faeculent matter. The intestine was then returned into the abdomen, but a large piece of omentum, which was adherent to the sac, remained in the wound.

The operation was of necessity protracted. The patient seemed rather exhausted. He was given some brandy; and when placed in bed, expressed himself as much relieved. Mr. Stanley ordered grain doses of opium every sixth hour, and the patient progressed very favourably, though he vomited slightly. On the next morning, however, he was found worse. He had had three alvine evacuations during the night within a short space of time; since which, the pain in the abdomen has been violent. The motions were liquid, and of a peculiar brick-red appearance. The countenance became very anxious, the abdomen painful to the touch, the pulse weak and frequent, and the patient died at eleven o'clock.

Autopsy.—The scrotum was extremely dark and livid, especially on the right side. The abdomen contained a quantity of turbid, reddish-coloured fluid, and a large and thick omental band was found leading down to the iliac fossa. The strangulated portion of intestine was dark, and altered in appearance; it was firm, not gangrenous, but intensely congested; and the coils were agglutinated together by recently effused lymph. The cellular tissue of the scrotum was infiltrated with blood, and there was a large cavity between the sac and the walls of the scrotum, containing a quantity of effused sanguineous fluid.

These appearances seem indicative of a great deal more bruising than is generally noticed, even in cases where the handling has not been gentle in the least; and it may become a question whether this result was owing to very rough manipulation, or to the considerable amount of intestine which filled the scrotum. It is probable that the latter being in a state of great distention, some vessel had given way when efforts at reduction were made. It will thus be seen that large protrusions may, contrary to received opinions, prove very difficult of reduction, and that both in small and large herniæ it will be of great importance to follow the line of conduct which we have discussed above.

Ectrophia Vesicæ; (Absence of the Anterior Walls of the Bladder;) Operation; Subsequent Death.

(Under the care of Mr. Lloyd.)

"Of all instances in which an arrest of development of parts has taken place during the human fœtal life, none surpasses in interest or importance that which affects the genito-urinary organs: for, inasmuch as the malformation is in great measure confined to the bladder and urethra, the sufferer from such structural defect may attain mature age—in the great majority of instances sexually incapacitated—a burden to himself and repulsive to those around." [Mr. McWhinnie, *Medical Gazette*, vol. i., 1850, p. 560.] We fully agree with the author of this passage, which forms the introduction to a very instructive paper on malformation of the bladder, and we have lately seen such sad cases in different hospitals of London, that we do not wonder that both patient and surgeon are desirous that a rectification should, even at some risk, be attempted.

In a former number of this journal we had occasion to mention two cases of congenital malformation of the bladder; one under the care of Mr. T. Wakley, at the Royal Free Hospital; the other under that of Mr. Simon, at St. Thomas's Hospital. The former of the two patients has gone into the country with one of those excellent apparatuses first introduced by Professor Jurine, of Geneva, successfully used by Dr. Andrew Bonn, of Amsterdam, in 1788, and greatly improved by Mr. Earle, with which the protruded and tender posterior walls of the bladder are covered and protected from the friction of the clothes, and the urine conveyed by a tube to a receptacle fixed to the calf of the leg. The second has undergone an operation for which instruments of a very ingenious construction were contrived, by means of which the urine will ultimately take its course per rectum. The boy has been for some time under treatment, and we refrain from entering into details, as the case is so important that it deserves, at a future period, when the results are well ascertained, a very full and circumstantial description.

On the 3rd of October, 1851, a case of an analogous description presented itself at St. Bartholomew's Hospital, and the patient was admitted under the care of Mr. Lloyd. He is a German by birth, about thirty years of age, strong and stoutly made, with dark hair and complexion. His health seems to be pretty robust, but he states that he has had of late to undergo great hardships, sleeping in the open air for several nights, and being in great want of food. These circumstances were the more to be regretted, as his station in life had not inured him to privations.

The malformation had for the last few days given him great pain, and he was anxious that something should be attempted to relieve him from the inconvenience. The case requires no particular description, as it resembled very closely the deviations which have been described by various authors as ectrophia vesicæ, or absence of the anterior walls of the bladder. There

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was evidently great separation of the ossa pubis; the protruded posterior wall of the bladder was comparatively small whilst he was lying down, (though the size depends of course on the more or less pressure made by the intestines behind;) the ureters opened in the usual places; there was the ordinary epispadias, with the urethra forming a mere groove, on a short penis terminated by an imperfect glans; but the testicles were well developed and pendulous, though completely separated.

There was, however, one peculiarity which the two cases above mentioned did not present—viz., absence of muscular texture for about three inches above the bifurcation of the skin on either side of the protruded mucous membrane; this absence causing a bulging of the skin of the size of a small orange just above the malformed bladder. On this tumour the umbilical cicatrix was situated. This was a kind of hernial sac somewhat analogous to the one mentioned in Mr. Mayo's case, quoted by Mr. MeWhinnie in the above mentioned paper. Mr. Mayo says: "In the hypogastric region, in the situation occupied by the malformed bladder, (*when it exists*,) an oblong pouch presented itself, which appeared to be the result of the divergence of the recti muscles, whose tendons were inserted into the separated angles of the symphysis, and thus left the anterior part of the abdomen without any other protection than the skin and fascia, and the peritonæum which lined the pouch." The state of things in Mr. Lloyd's patient bears much similarity to harelip reaching only half way up to the nostrils, with thinning of muscles.

Mr. Lloyd having consulted with his colleagues, it was agreed that means might be resorted to in order to direct the urine (which constantly trickled from the exposed ureters) into the rectum, and Mr. Lloyd thought that when this was accomplished, it would not be difficult to procure, by lateral traction, sutures, &c., a sufficient cutaneous covering for the sensitive bladder. The mode of proceeding which Mr. Lloyd adopted for eventually conducting the urine into the rectum, was as follows:—

The patient was brought into the operating theatre, and when fully narcotized, Mr. Lloyd introduced the index finger of his left hand into the anus, and glided upon that finger a seton-needle armed with a silk thread, to which was attached a thick skein of the same material. There was some difficulty in directing the needle around the pubic ligament from the rectum, and close to the prostate, into the posterior walls of the bladder the greatest pains being taken to keep away from the peritonæum; but after a little while the needle was seen to transfix the tumour. The thread was now disengaged from the eye, the lance, which could be taken off from the stem, removed, the handle and stem withdrawn through the anus, and the skein pulled after the thread, and made to pass through the protruded vesical walls. Mr. Lloyd considered that the traction downwards exerted would cause the urine to pass by the skein into the rectum, and that in all probability a canal might thus be formed, which would materially diminish the inconvenience produced by the malformation.

The patient slowly recovered from the narcotizing agent, and was conveyed to bed. This agent had not been simple chloroform as is habitually used, but a mixture of ether and chloroform in the proportion of one-fifteenth part of the latter to one part of the former. It was administered by a gentleman from Germany, by means of a large bladder, to one end of which was attached a pasteboard mouthpiece covered with leather, the fluid was poured in whilst the patient was inhaling, by means of a canula fixed to the body of the bladder, resembling those used for tapping the abdomen or chest. After the patient had breathed for a few seconds, he made a sudden convulsive movement and struck the whole apparatus away; he was, however, soon afterwards completely insensible, and did not seem to feel the operation which was performed on such very sensitive parts. When he awoke, he began to groan very loudly, in a manner which we had never noticed when chloroform alone was used.

The patient complained very much of his head after the operation, and of great discomfort towards the rectum and anus, the sensation being as if he were under the necessity of passing a motion. The case proceeded pretty favourably up to the fourth day, when the patient began to complain of sickness and threw up a great deal of bile. Some castor oil was administered, but it was immediately rejected, and the sickness continued unabated. Whatever fluid or solid was ingested, was immediately thrown up again, with much pain and distress. No action of the bowels could be obtained, and the patient was always craving for cold water. On the sixth day, Mr. Lloyd removed the skein, but the man became much worse; he complained of pain in the abdomen, which was very tender to the touch, and tympanitie; and he expired on the seventh day after the operation.

The body was examined with great care, and it was found, on opening the abdomen, that the immediate cause of death was acute peritonitis. The intestines on the lower part of the abdomen were highly congested, some portions matted together, and a certain quantity of lymph effused on their surface. The organs of the chest presented no abnormal deviation; and when the pelvis was brought into view, this cavity was found, as is usual in such cases, of very small dimensions. In fact, as the anterior portion of the bladder is wanting, and the posterior half is protruded externally, hardly any room is required in the pelvis, except for the generally small prostate gland, the rectum, and the small intestines, which the mesentery allows to descend so low. The rectum had much deviated to the left side of the sacrum, and the peritonæum covered it as low down as the anus, so that the seton-needle had passed through the cul-de-sac formed by that membrane so much lower than usual. Thus it became plain how the peritonitis had been excited.

The malformed organs presented about the same peculiarities as have been recorded of other cases: the pubic bones were separated to the extent of about three inches, a strong ligamentous band being thrown across. The testicles were well developed; they had fully come down, and were lying on each side of the symphysis, in a scrotum, bifid above, but well formed below, the right testicle being much larger than the left. The penis, which presented the usual epispadias, was about two inches and a half long, the glans having gained more development than is usually seen in such cases. The prostate was of small size, and the apertures of the vesiculæ seminales opened at the root of the malformed penis, and on the inferior portion of the bladder. On the right side was an inguinal hernia containing constricted omentum.

Mr. Lloyd had been told by a friend of the patient that sexual desires had been felt, and it was even supposed that he had a wife and child in Germany. That such sensations may have existed is extremely probable, considering the development of the testes and vesiculæ seminales. Procreative powers are said to have existed in a young man, twenty-two years of age, whose case is mentioned in the twentieth volume of the *British and Foreign Review*, and where the genital organs were much less developed. In that case the vesical tumour was very small, and the glans penis

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quite wanting; but sexual desire was strong, and the seminal fluid oozed between the rudimentary penis and the bladder.

The umbilicus in the present patient was situated immediately above the vesical tumour, and was discernible; it has, however, sometimes been so concealed that some pathologists have in similar cases doubted its existence. On this head Geoffroy St. Hilaire says, in his *Historie des Anomalies*, "In cases of extroversion of the bladder, the umbilicus is close to the symphysis pubis, as with the embryo and the young fœtus, and thus it comes to be very near the vesical tumour. In fact it is almost always immediately above the protruded bladder, and the upper extremity of the latter may even ascend beyond the umbilicus, and conceal it. Hence the error of some authors who have thought the umbilicus absent." Vrolik, in the *Cyclopædia of Anatomy and Physiology*, says, on the same subject: "It (the bladder) forms a red, spongy tumour, situated somewhat above the separated pubic bones, and involving the umbilicus, so as to give the appearance of a deficiency of the umbilical cicatrix."

We do not find in the various works written on teratology, that remedial means have frequently been resorted to in order to diminish the inconvenience of the malformation now under consideration. As stated above, it was Jurine of Geneva who first thought of applying a silver bowl and a bag, at the beginning of the eighteenth century. The plan has often been imitated and improved since. Breschet mentions, in the *Dictionnaire des Sciences Médicales* (1815,) that a celebrated French surgeon of Paris had proposed to a boy of fourteen years, affected with extroversion, to place silver or gum elastic catheters into the orifices of the ureters, and when these canals had been accustomed to the presence of the foreign bodies, he would have given them a wide and expanded mouth, and made them communicate with a bladder or urinal to be worn by the patient; but the boy refused the operation.

Mr. McWhinnie states, in the paper above alluded to, that Mr. Earle "endeavoured in a similar case (a female,) by the repeated application of escharotics, to destroy some of the exposed mucous surface, with the view of obtaining cicatrization, and thus diminishing its sensibility; but in this he was unsuccessful." It has also been proposed by some surgeons to bring together the integuments from either side of the fissure, and change the grooved urethra into a canal by autoplasty; but this operation has not yet, to our knowledge, been carried into effect. Of Mr. Simon's operation we shall soon have an opportunity of speaking at full length.

As to Mr. Lloyd's case, it is unfortunate that the first step in the series of operations which were projected should have had a fatal issue, owing to the abnormal situation of the parts. It is evident that in cases of malformation no reliance can be put on the normal anatomical relations, for it has been observed that such arrests of development often involve more than one set of organs. St. Hilaire, a great authority on the subject, enumerates the following complications of extroversion of the bladder:—"1. More or less complete absence of the genital organs; 2. Acephalia; 3. Exomphalos; 4. Imperforate anus, with incomplete development of the rectum; 5, and last. Median fissure, either of the sacrum or of the spinous processes of some vertibræ of the lumbar, and more rarely of the dorsal and coccygeal regions; these anomalies all resulting from an arrest of development."

The latter phenomenon is now looked upon as being chiefly concerned in the occurrence of malformation of the bladder; the theory of Chaussier, that it arose from a tearing of parts, being quite exploded. As to the probable cause of the imperfect development, we shall conclude by quoting an author who has very recently written on the subject—viz., Professor Vrolik. In the *Cyclopædia of Anatomy and Physiology*, article "Teratology," the Professor says:—"It (the malformation) can only be explained by an imperfect development of the urinary bladder from the allentois. It is not improbable that the urinary bladder is formed by two half parts, which approach each other anteriorly and posteriorly on the mesial line. If this junction does not occur, the different forms of vesica inversa will occur."

ROYAL FREE HOSPITAL.

Treatment of Chronic Abscess connected with the Periosteum.

(Under the care of Mr. Gay.)

THERE are few affections calculated to wear out the surgeon's patience so thoroughly as the slow and tedious phenomena which mark the progress of caries. Whether this pathological change affect joints or shafts, it is for the most part marked by a succession of abscesses, which, leaving after them fistulous tracts, thickening, and chronic inflammation, tend to undermine the health of the patient, and cut him off by hectic fever. It is, therefore, no wonder that at different periods surgeons have striven to arrest the progress of the disease, either by local applications, general measures, injections into the sinuses, cauterization, incisions, &c., still they are too often obliged at last to advise and perform amputation.

As regards joints, it should be at once stated, that resection has very happily, in many instances, rendered the ablation of the limb unnecessary; and that caries of other portions of bone has likewise, in recent times, been treated on improved plans, which have precluded the necessity of harsh measures. Among these plans, we should mention that of M. Boinet, of Paris, who has brought forward several successful cases treated by strong iodine injections, wherewith he so thoroughly modified the carious surfaces as to promote cicatrization. Nor has the method of *scraping* carious bone been unsuccessful; we have frequently seen it applied in the hospitals of London, and it has, with a few exceptions, been followed by a new action in the part, and eventual cicatrization.

A short time ago we recorded some cases illustrating the line of treatment which Mr. Gay employs in certain cases of articular caries. Mr. Gay advocates the practice of making a free and deep incision into the hardened and œdematous tissues, riddled with fistulous tracts; he considers that the parts being thus largely laid open are in a favourable state for the extrusion of pent-up pus and detritus, that a new action is excited, and that satisfactory anchylosis is obtained. But tedious and obstinate abscesses are not *always* dependent on diseased osseous texture, though, indeed, such purulent accumulations, unconnected with bone, may sometimes give rise to many of the symptoms which mark ulceration of bony substance. How are such abscesses to be treated when all the ordinary means have for years been used in vain? Mr. Gay thinks that these cases should be subjected to a treatment analogous to that which he puts into practice where carious bone keeps up the irritation; and he is doubtless strongly supported by the two following instances, where the disease was arrested by such measures. We shall just attempt an outline of these cases, and subjoin Mr. Gay's remarks on the same:—

T. W.——, aged seventeen years, a remarkably healthy-looking lad, received a smart blow on the lower and back part of the arm, *seven years* since.—

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The part inflamed, but the exact course the disease took could not be clearly gathered from the patient. It is sufficient to state that it resulted in an abscess which opened just above the olecranon; that the sinus has remained ever since, defying attempts to heal it, which have been made each successive year at one of the largest metropolitan hospitals; and that by slowly limiting the action of the elbow-joint, it has become a considerable hindrance to the performance of the poor lad's daily labour.

He presented himself at the Royal Free Hospital, and was admitted on the third day of June, 1850. Mr. Gay made a careful examination of the seat of disease, and found the following appearances:—An unhealthy-looking sinus, with an aperture so small as to prevent the free exit of the matter that was behind, led to a large cavity, evidently beneath the triceps extensor muscle, and, as far as could be made out, bounded below by the periosteum. This cavity extended up the arm as far as the probe could reach, and its walls appeared to be ill-defined and ulcerative. Distally it was bounded by the olecranon, and, as far as could be ascertained, was independent of the joint.

Mr. Gay regarded the diseased action as having originated in the bursa between the posterior aspect of the lower end of the humerus and the muscle; but he found some difficulty in accounting for the duration of the affection, and evident disposition to remain *in statu quo*, if not to extend itself so as in the end more seriously to incommode the joint. There was no carious or necrosed bone to separate; and the only explanation that could be had recourse to was, that the insufficient aperture of the abscess did not allow of its contents to escape, and that the confined matter kept up the ulcerative action by which the walls of the abscess were affected.

Mr. Gay, whilst the patient was under the influence of chloroform, passed a director and a bistoury on it, through the sinus, and carrying the latter the full length of the abscess in the direction of the bone, cut it fairly up. This allowed of a full examination of the interior, which was found to correspond with the notion that had been formed at a prior examination. The muscle was cut through; a few small vessels bled, but these were stopped by the lint, with which the whole wound was tolerably tightly plugged, and the whole was kept together by a roller.

The cavity continued to discharge a thin, dirty-coloured, curdy pus, and it was not until three weeks had passed that the wound assumed the slightest apparent tendency to heal. After this period, however, granulations sprung up; the wound was, in the meanwhile, kept well plugged, and the arm as tightly bandaged as the boy could bear it; the healing went on slowly but satisfactorily. It is now cicatrized, excepting the skinning over, but with adhesion of the tissues to the periosteum, and a slight thickening of this membrane. The use of the joint is still limited, but not more than it was on the patient's admission.

Case 2.—J. T——, aged eleven years, was admitted on the 8th of June, 1851, under the care of Mr. Gay. This lad, eight months before, fell, and struck the back and lower part of the arm against some hard substance, so as to create considerable inflammation in the soft textures. An abscess formed and burst within half an inch of the olecranon. In this, as in the other case, the aperture or sinus was small, and consequently a free discharge of the matter could not take place, and there was no disposition to heal. The motion of the elbow-joint was likewise limited.

A long probe could be passed at least two-thirds up the arm, along the bone, between the muscle and periosteum. The character of the abscess, as well as of the discharge, was in every respect the same as in the preceding case, and in all probability arose in the same structure. The disease had run the same course, with the exception that the cavity of the abscess was much more extensive, especially in the direction towards the shoulder.

In this case, Mr. Gay also made a free incision (of four inches long) through the walls of the abscess, and plugged it. With this patient also the process of healing was delayed for three weeks, and after it had commenced was seriously interrupted by an attack of fever. During its continuance, the sides of the cavity assumed a very unhealthy appearance, and discharged an abundance of thin, ichorous matter. As it passed away, however, granulations appeared, and, as the lad gained strength, so the progress of the sore towards healing became more marked.

By keeping the cavity filled with lint, and bandaging the arm, the wound ultimately healed, but with the same results as in the previously narrated case. The tissues adhered to the periosteum; this membrane or the bone became thickened, and the limited motion of the joint appeared as though it would continue, at all events, for a considerable length of time.

These two cases, occurring simultaneously, present so many features in common, and so many in contradistinction to ordinary abscesses, whether connected with bone, or taking their origin in a bursa, (as the patellary abscess,) as to be worthy of some little attention both as to their character and mode of treatment.

It is very obvious that the abscess originated in tissues independent of bone; but in tissues separated from it only by the periosteum. It is also obvious that from some cause or other, there was not, in either case, any marked tendency to spontaneous reparation, although (supposing the suppurative action to have originally set up in the bursa found to exist in this particular situation) the bursal membrane had been completely destroyed, and the surrounding textures had, in respect of the abscess, supplied its place.

Why, then, did this tendency to continuous suppuration exist? Mr. Gay is inclined to think it may be ascribed to one principal cause: viz., the depth at which the disease was situated, and the obstruction which thence arose to the effectual discharge of the pus and *débris* that became separated from the decaying or ulcerating tissues, the latter being thereby kept in a state of constant irritation.

Mr. Gay was, by these patients, reminded of another case in the Free Hospital, about three months since, in which a similar abscess, of large dimensions, formed very deep beneath the muscles on the front and middle portion of the thigh, in all probability beneath the crureus. This abscess was opened by a tolerably free incision; bloody matter flowed out; it continued to issue for several weeks, and it was not until the endurance both of the patient and the surgeon was almost exhausted, and all attempts (especially that by firm bandaging on both sides of and towards the opening) appeared to be well nigh useless, that the pus assumed a healthy character, and the wound began to heal.

Mr. Gay remarked that the practical inferences to be drawn from these cases and their treatment, appear to be as follow:—That abscesses are not unfrequently suspected to have their origin in disease of bony tissue, simply because the probe leads down to the periosteum, and such abscesses refuse to heal in obedience to means ordinarily adopted for similar affections of a more superficial order; and that on this account the plan adopted in the foregoing cases, (the

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only one that will ensure their timely healing,) is not, as often as it should be, resorted to. He would, therefore, advise that in all deep abscesses, where the probe, although it leads to the periosteum, does not detect an abrasion of that membrane, the sinus should be dilated by the bistoury, and kept open by being plugged, so as to secure a free and complete discharge of the secretions. Mr. Gay, however, added he did not mean that an exception should be made to this rule in cases in which diseased bone is detected; he confined his remarks to abscesses connected specifically with the soft tissues, and the suggestions as to treatment were, on this occasion, intended to refer to them exclusively.

LONDON HOSPITAL.

Extraordinary Impaction of the Head of a Large Screw into the Wrist-joint.

(Under the care of Mr. CURLING.)

THOSE who have carefully dissected the wrist-joint, and have followed, with the scalpel, the closely set and waving line of the eight little bones forming the carpus, remember full well how tightly these bones are bound together, and how difficult it is, even with a sharp instrument, to separate these connexions. They will easily conceive that this joint may be crushed or fractured by a weighty body or great violence, but they will with difficulty believe that the head of a screw, more than one inch and a half square, may be thrust between the carpal bones, so as to be completely embedded and hidden, either between the rows, or between the upper row and the articular extremity of the radius.

Indeed, we venture to say that the screw of which we give an engraving below, might be placed in the Pathological Museum of the Royal College of Surgeons of England, by the side of the celebrated shaft which was forced through the chest of Mr. Thomas Tipple, in the year 1812, and the iron pivot which passed obliquely through the body of the German sailor, in 1831.

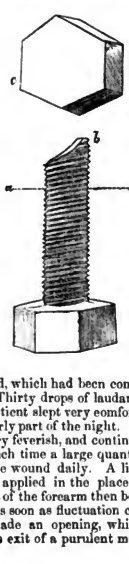
It will be remembered that Mr. Tipple, under the care of Mr. Maiden and Sir W. Blizard, made a good recovery, and died eleven years after the accident; the sailor likewise recovered, and is probably alive at the present moment. We are aware that in the present case, life was not so miraculously saved as in the above two instances, but the nature of the accident deserves to be recorded, as it is not likely to occur again, and since the possibility of its happening might *a priori* have very properly been doubted. We are indebted to Mr. Brushfield, house-surgeon to the hospital, both for the details of the case, and the drawing from which the engraving is taken.

William M——, aged thirty-seven, a lucifer-splint cutter, residing in Stepney, was admitted into the London Hospital under the care of Mr. Curling, on the morning of May 6th, 1851, on account of a large screw with an hexagonal head being impacted in the right wrist-joint. The history he gave of his accident was as follows:—

The knife used in cutting the splints was driven by a steam engine, eight-horse power, and worked horizontally backwards and forwards in a fixed frame, there being two screws at the posterior part to regulate its motion. At the time of the accident, his right hand was resting upon the frame, and without his being aware of it, the machinery was set in motion; as the knife moved backwards, his hand became fixed between the frame and one of the regulating screws, and the motion being still continued, the head of the latter was forced into the joint, and became firmly fixed there, the sensation at the time being that of a dead weight upon the part. His hand accompanied the knife in its motions until the machinery was stopped, and then, after some difficulty, the screw was filed through, the major part being left in the limb. He was placed in a cab, and brought to the hospital immediately.

Examination.—The limb supinated. On the dorsal surface of the wrist-joint, and opposite to the metacarpal bone of the index-finger, about half an inch of the screw presented itself above the level of the surrounding skin. Let it be well understood that the hexagonal part was stuck in the wrist, and that only half an inch of the circular part was projecting from the surface. When laid hold of, and the hand partly flexed, it could be slightly moved, but when extension took place, it was quite immovable. The skin on the ulnar side was slightly lacerated, but on the radial it was inverted, and embraced the foreign body so tightly, that the smallest probe could not be passed between the two. Around the wound was a small oozing of blood, mixed with synovia.

By means of a scalpel the wound was dilated in either direction, and after some time, and no small amount of force, the foreign body was extracted, a discharge of synovial fluid following this release. During the period of the extraction, the patient was faint, and felt very sick, but immediately afterwards he expressed himself as being in a state of comparative ease. Some small fragments of bone were removed, but there was no bleeding. The limb was placed on a straight splint, and the wounds dressed with strips of wet lint. The following is a representation of the screw, exactly of the natural size, *a a* to *b* being the portion above the level of the skin, and *c* the irregular



hexagonal head, which had been completely impacted in the joint. Thirty drops of laudanum were administered; the patient slept very comfortably during the evening and early part of the night. On the following day he was very feverish, and continued so for nearly a week, by which time a large quantity of pus began to flow from the wound daily. A linseed-meal poultice was then applied in the place of the wet lint. The lower part of the forearm then began to swell and inflame; and as soon as fluctuation could be detected, Mr. Curling made an opening, which measure was followed by the exit of a purulent matter.

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Inflammation, occasionally reaching to the arm, continued to recur at irregular intervals for five weeks, during which period several abscesses formed around the joint, and were opened. On June 8th (about five weeks after admission) great swelling and redness of the parts around the primary wound had taken place, and the pus, which had hitherto flowed freely, was scanty in quantity, and of a different colour from that discharged from the other openings. A probe was carefully inserted between the edges of the wound, and some obstruction was distinctly felt about half an inch below the surface of the skin; a fine pair of dressing forceps was then used to extract the foreign body, which proved to be a small portion (about three-quarters of an inch square) of the woollen coat, carried into the joint at the time of the accident.

The next day a large piece of loose bone presented itself on the anterior surface of the joint: it was cut down upon and extracted, the patient experiencing great relief from its removal. From this time the openings of all the abscesses, four or five in number, gradually closed, and the original wound occasionally discharged small fragments of bone previous to its perfect closure.

The patient was discharged on August 7, three months after admission, and ordered to attend as an out-patient. He was then able to move his fingers without giving himself the slightest pain, and all swelling had subsided.

It is very remarkable that the head of the screw impelled by the force of the engine did not crush and fracture the bones entering the wrist-joint, but that these in some degree gave way and receded before the compressing action of so blunt a body as the large head of a screw. The latter is in the possession of the surgeon, and we still think, as stated above, that, accompanied by an appropriate drawing, representing the wrist-joint at the moment the patient was admitted, it would be very advantageously placed by the side of the shaft and iron pivot.

Acute Rheumatism; Rheumatic Carditis; Apparent Metastasis to the Brain, quickly fatal.

[Under the care of Dr. Cobb.]

It has now for some time been well known that rheumatic carditis is sometimes accompanied by an attack of delirium and violent cerebral symptoms, which may induce the belief that inflammation has been set up in the head. This complication was at first looked upon as a metastasis of the articular inflammation to the brain, but frequent autopsies soon showed that such was not the case, and pathologists were naturally led to attribute the cerebral disturbance to the irregularities which the rheumatic carditis must inevitably excite in the circulation of the blood. These facts have been elucidated and commented upon in a very attractive manner by Dr. Watson, in a lecture published in the sixteenth volume of the *Medical Gazette*, part of which is quoted in the lectures on the Practice of Physic by the same author.

Dr. Watson cites three cases which have come under his own notice; in the first, "the pericardium was glued to the heart," &c.; in the second, "the pericardium was free from disease; but upon the mitral valve, near its edge, there was a perfect row of small, slender, bead-like warts;" and in the third, the pericardium was slightly adherent, and the mitral and aortic valves presented excrescences. In all of them, however, no traces of inflammation were discovered in the brain, except "more or less fluid in the meshes of the pia mater, and in the lateral ventricles." This effusion Dr. Watson shows satisfactorily to be a "secondary effect of the cardiac disease," and he immediately afterwards quotes cases of cardiac delirium, where such effusion did not take place at all.

Now we beg permission to lay before our readers a case of rheumatic carditis, accompanied by delirium, lately under care of Dr. Cobb, where not only no such effusion took place, but in which the usual marks of inflammation of the peri- or endo-cardium *were apparently absent*. Death ensued very rapidly, and it may be supposed that there was, in fact, no time for the ordinary events of inflammation to take place, and leave the usual traces. The cardiac affection was of a suddenly metastatic kind, and seems to have so completely destroyed the equilibrium of the organism, that its power gave way to the shock. From particulars kindly furnished by Mr. Hall, we offer the following outline:—

Eliza F——, aged twenty-six, a servant, with dark hair and eyes, and delicate constitution, was admitted, July 29, 1851, under the care of Dr. Cobb. The patient has been indisposed for some time, and subject to paroxysmal attacks of coughing, with expectoration. A few months ago she was admitted into this hospital, under the care of Dr. Frampton, for dyspnœa and pain in the chest, and since that period her health has been more or less defective. Two or three weeks ago the patient was attacked with sore-throat and slight febrile symptoms; a few days afterwards the usual symptoms of rheumatism declared themselves. She took for ten days of her own accord, opium and mild aperients, and not getting any better, she was admitted into the hospital. The patient is of temperate habits, used to active and industrious employment, subjected to sudden changes of temperature, and accustomed to keep very irregular hours. The present illness began by a sensation of debility and pain in the limbs; presently this was succeeded by rigors and febrile symptoms; the ankles and feet then began to swell, and became acutely painful. When the girl was admitted, her knees were tumefied, and very tender to the touch; the fever ran high; and the whole frame was bedewed with acid perspiration. Tongue white and coated: pulse full and quick; bowels confined. She was ordered one ounce of saline mixture thrice a day, and to have a warm bath before going to bed.

In the evening the patient felt easier, but the pains were sufficiently acute to prevent sleep; she was therefore ordered half a grain of hydrochlorate of morphia. The heart's action is clear, though somewhat accelerated; but the patient complains of no uneasiness about the cardiac region. On the second day no change had taken place in the joints, and the chest was free from pain. An aperient draught was prescribed for the next morning. This acted well; but now, for the first time, a slight amount of palpitation was complained of, and a faint, scarcely appreciable bruit could be detected in the præcordial region, the second sound being clear and slightly prolonged.

To allay the great thirst which the patient complained of, she was ordered lemonade, and Dr. Cobb prescribed a pill of one grain of calomel and half a grain of opium, to be taken every sixth hour.

On the fourth day, the girl expressed herself as feeling easier; the pulse was moderate; the heart's action slower and softer than on the previous day, but some bruit could still be distinguished.

On the fifth day, the rheumatic swelling and pain left the knees and ankles, and settled on the right wrist and hand, which parts became very painful and inflamed; the acid perspiration continued, and the bowels became confined. An aperient draught was administered, and on the next day (being the sixth) the patient appeared to be easy and comfortable; she

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was cheerful, and said that she had passed a good night. No particular change had occurred in the symptoms, but the gums were slightly touched.

In the evening of this day, however, the patient suddenly awoke, after having slept about an hour: she appeared to be much alarmed, wished to get out of bed, seemed conscious of some impending danger, and uttered with some rapidity suppressed moans. She was with some difficulty prevailed upon to stay in bed, and when seen soon after this attack, she was found propped up with pillows, lying upon her back, her countenance expressing both pain and anxiety. The breathing was rapid and somewhat laboured, and she uttered at intervals peculiarly sharp and subdued moans; the features were contracted; the mouth firmly closed; the lips pressed together, and somewhat congested; the eyes moist, and the cheeks flushed. The heart was beating violently and loudly, the movements being perceptible over the whole of the left side of the thorax, and somewhat to the right of the sternum; the common carotid arteries were also pulsating strongly. Indeed, so great was the tumult in the thorax, that the action of the heart was very evident, and the sounds distinctly to be heard, at the foot of the patient's bed. Auscultation gave a loud and prolonged murmur, resembling a current of air passing through a wide tube; the chest was heaving rapidly; and the pulse was so quick that it could scarcely be counted. The patient had vomited a small quantity of a greenish-coloured mucus; and before she had fallen asleep, it was noticed that her manner was somewhat changed.

Leeches were immediately placed over the præcordia, a blister to the chest, and two grains of calomel, with ten of Dover's powder, administered. The leeches had the desired effect; the action of the heart became less violent, but the murmur was still audible; the pulse remained full and firm, but the patient became insensible; she did not hear questions any longer; and among the quick and laboured acts of respiration, stertor was now perceived. The upper eyelid now began to drop, the pupils contracted, and the globe was fixedly directed upwards and outwards. Convulsive motions were soon perceived, the limbs became slightly rigid, and the mouth was so firmly locked, that the calomel which had been prescribed could not be given at all. The patient soon became completely comatose, and after a few convulsive movements, died at ten o'clock at night, on the sixth day after her admission and four hours after the sudden attack of delirium.

The inspection took place twelve hours after death. When the lungs were brought to view, they presented a greyish colour anteriorly, but in all other parts the tints were deeper and the organs much congested, particularly about the upper and lower lobes. There was much emphysema, and a frothy mucus with a sanguineous tinge, readily escaped on sections being made. No tubercular deposit was detected in either lung, but the pulmonary vessels, on being opened, gave exit to a large quantity of blood, and the bronchi were greatly distended with mucous secretion. The heart, pericardium, and great vessels, having been removed from the chest, were found to weigh seventeen ounces and a half; the heart alone, when well washed, weighed thirteen ounces. The pericardium was pale, perfectly smooth, and free from any adhesion or deposit of lymph; it presented no deviation from the normal condition, and held about ten drachms of pale, straw-coloured serum.

The heart was found of a somewhat larger size than is usual, considering the patient's age and sex; it was covered with much fat, particularly at the base and posterior surface, and the muscular structure was rather pale, softened, and lax; the ventricles, especially the right one, contained large and firm fibrinous deposits, sending processes to the different vessels in connexion with the heart. These fibrinous masses were very inelastic, they broke readily asunder, and had a granular texture. The columnæ carneæ of the left ventricle appeared enlarged; the mitral valves slightly thicker than usual, but they were free from any deposit. The semi-lunar valves of the aorta seemed quite unchanged, slightly opaque, but free from roughness.

On examining the abdomen the liver was found hypertrophied, the colour normal, but the organ much congested; it weighed four pounds. No alteration of importance was discovered in the other abdominal viscera; the ovaria, however, were enlarged, and the right contained a perfect Graafian vessel in its interior, and four small and translucent cysts, not exceeding the size of a pea, were developed on its surface. The left ovarium was studded in a similar manner by six or seven small cysts, and between the fimbriated extremity of the Fallopian tube and right ovarium, was situated a cyst of the size of a nutmeg, filled with a transparent, pale, straw-coloured fluid.

The calvarium having been raised, the dura mater was seen thickened and firmly adherent to the posterior part of the skull; the arachnoid presented no alterations; its vessels were, however, somewhat congested. The cerebral substance was healthy and firm, it did not offer any trace of congestion, and none of the cavities of the brain presented any abnormal appearances.

Here, then, were witnessed an intense amount of cardiac disturbance, delirium, coma, convulsions, and death, with hardly any of those pathological changes which, on inspection, we generally look for in similar cases. Or shall we consider the ten drachms of serous fluid found in the pericardium as an event of inflammation? This position is hardly tenable, and in lieu of it might we not with some reason look upon the cardiac phenomena as a sudden metastasis of the rheumatic inflammation upon an organ *already* in a state of slight hypertrophy, which inflammation produced an effect on the cerebral mass, which has been noticed in several other cases? The patient sank under the attack, and so rapidly that tangible traces of inflammation were not discovered in the heart, though it is evident, looking at the symptoms of the sudden seizure, that such inflammation must have existed, and was mainly instrumental in the fatal result.

ST. GEORGE'S HOSPITAL.

Tænia Solium. Relapse after the Use of the Kousso.

[Under the care of Dr. WILSON.]

Few medicines have of late been more extolled, have been more extensively announced, and were received with more favour than the kousso. Our own pen has been repeatedly wielded to acquaint our readers with the good effects which we had opportunities of witnessing. By these reports it will be seen that the kousso, as obtained from the vendor, (M. Boggio, of Paris,) does not fail to produce the evacuation of the worm in a very short time. We at that period dwelt on the circumstance of the drug being sold at so high a price, (17*s.* 6*d.* a dose,) but since that time certain changes have occurred in this respect.

Samples of kousso were sent to Dr. Budd and to Mr. Savory, of Bond-street, by the colonial surgeon of Aden, and the trials which were made with these specimens were very satisfactory. Indeed, Mr. Savory, with great liberality, sent sufficient quantities

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to various charitable institutions, and the accounts of the experiments which were then made were extremely favourable. So far then might we indulge in very bright hopes respecting the weapon we possessed to combat the terrible enemy; for the kousso, being no longer exclusively imported by one house, must necessarily decline in price, and its benefits be spread to all classes of society.

But two interesting questions remained—namely, whether the kousso possessed the power of expelling the worm *with the head*, and whether patients who had evacuated an entozoon of a considerable length were or were not subject to a relapse. As to the first, we are obliged to state, from several examples that have fallen under our notice, that in many cases the head, so easily distinguishable from its diminished size, did not pass with the worm; and as to the second, we have a few days ago become acquainted with facts touching three patients at the same time under the care of Dr. Wilson, which will tend to show that the kousso, though it expels the worm with certainty, does not guarantee from a relapse.

The value of the drug would then appear to be no higher than that of turpentine or the oil of male fern; for the latter substances, when taken with care, are lik wise pretty sure to cause the evacuation of the parasite.

There is another consideration to which we desire for a moment to draw our readers' attention. Even supposing any of the above-named substances had the faculty of causing the expulsion of the worm with the head, it will ever be of great importance to place the patient, after he has been freed from the worm, into a condition sufficiently different from what it was during the springing up and development of the tænia; for if food, water, residence, habits, &c., are not changed, it is very likely that the same circumstances will bring on the same results, and relapse be the consequence. Patients should therefore be warned and be provided with some medicamentous substance whose tendency would be to counteract the growth and development of the tænia. This substance is not found as yet, and we are not aware that small doses of kousso were ever given with this view, but trials might certainly be made. With the assistance of the details kindly furnished by Mr. Potter, we shall now give a rapid sketch of the cases now under Dr. Wilson's care.

Case 1.—Harriet W——, a dark good-looking girl, sixteen years of age, was admitted into Queen's ward, Sept. 10, 1851, under the care of Dr. Wilson. This patient has been living for some years at Portobello-terrace, Bayswater, and has been troubled by the tape-worm for a long period. About four months ago she took a full dose of turpentine, which had the desired effect: the patient passed a worm which measured nine feet in length. She then had a little rest, but she soon began to pass fragments of the worm, and she now entered the hospital in order to get rid of the parasite altogether.

The girl presented the usual symptoms of tape-worm, and Dr. Wilson prescribed a dose of kousso to be taken on the second morning after admission. It was taken fasting, and the effect was produced in a very short time. The patient soon evacuated a worm measuring about three feet in length, but the head was not noticed to be attached to it. The kousso used in this instance, and in the two cases which we subjoin, was procured at Mr. Savory's in Bond-street.

Case 2.—James A——, aged twenty-one, a dark and robust-looking young man, and a shoemaker by trade, was admitted Sept. 10, 1851, into Grosvenor ward, under the care of Dr. Wilson. The patient is a native of Eaton, but has lately resided at Northampton. One year and a half ago, he first began passing fragments of the worm; these used to be expelled unknown to the patient, as he was sometimes surprised to find them about him. He took large doses of turpentine, but these did not promote the expulsion of the worm. At last, when at Windsor about ten weeks ago, he applied to the dispensary, where he was administered a dose of the patent kousso. This medicine caused the evacuation of a worm, seventeen or eighteen feet long; and after this relief he soon gained flesh, and the gnawing sensation at the pit of the stomach, and a peculiar debility and nervousness, left him.

This favourable state of things did not, however, last long; fragments were again passed, and he now sought relief in this hospital. Dr. Wilson ordered five grains of calomel at bedtime, and castor-oil in the morning, for the first day; and on the subsequent one the patient took six drachms of kousso while fasting. Some hours afterwards he was given infusion of senna with sulphate of magnesia; and though the stools were abundant, no appearance of the worm was noticed in them, except a few scattered fragments. Thus it might be surmised that the kousso failed in this case to have the usual effect.

Case 3.—John G——, a short dark man of sanguineo-nervous temperament, and a tailor by trade, was admitted into Grosvenor ward, Sept. 10, 1851, under the care of Dr. Wilson. The patient has always resided at Slough, is married, and of temperate habits. About four years ago he began to notice joints of the tape-worm, which he used to find about his legs and his shoes as he walked along; his principal symptoms were sinking at the pit of the stomach, and a voracious appetite. About eight months before admission, the patient took a dose of the kousso at the same dispensary at Windsor as the man mentioned in the preceding case; this brought away a worm twenty-seven feet in length, and this evacuation gave him much relief.

He had now rest for nine weeks, when he began passing joints again, and this circumstance induced him to come to London. The patient was then admitted into this hospital, under the care of Dr. Wilson. He took the kousso again, and this caused the evacuation of a tænia of the same length as the first. The man soon returned home, and perceived no symptoms of the worm until a few days before this, his second admission, when the joints appeared again as heretofore. Two days after his second entrance into the hospital, he took the usual dose of kousso, the bowels having been cleared with castor-oil on the preceding day, and as it did not act for five hours, infusion of senna and sulphate of magnesia were administered; the patient then passed a worm of very great length.

Here we have, then, three cases of relapse, the first (a girl) after taking turpentine, and the two others in spite of regular doses of the patent kousso. These facts may justly be considered of great value, because a remedy can never take a firm footing, and cannot be implicitly trusted unless the patients who have used it have been watched for some time afterwards.

The third case is the more valuable, as the patient has now taken the kousso three times—once at Windsor, and twice under Dr. Wilson. As to the second case, it remains of course a question whether there really exists a worm, or whether the dose of the medicine was not sufficiently large. Nor is the case of the young girl devoid of interest, for it affords a proof that, as far as the expulsion of the tænia is concerned, turpentine and the kousso act pretty much in the same manner. We heartily could have wished, for the sake of the afflicted, that the Abyssinian remedy had had

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the property of radically curing the disease; it should, however, be mentioned, that of all patients whose cases we have from time to time reported, none have, to our knowledge, applied again for admission into the hospitals where the remedy had originally been administered.

ST. THOMAS'S HOSPITAL.

Hypertrophied Cervical Glands; Removal; Death; Autopsy.

[Under the care of Mr. SIMON.]

THAT the strumous diathesis is transmissible by heredity, is a pathological fact which is unfortunately but too well ascertained; the knowledge of this fact is however very useful, and affords much aid when we are striving to form our diagnosis. But how much greater would be the utility of this knowledge if we were often given an opportunity of counteracting the tendency to scrofulous diseases, rather than requested to prescribe for them when they are unmistakably developed! Were medical men more frequently consulted as to the general management of children *before* the morbid germ begins to show a tendency to visible manifestations, a host of evils would be avoided.

But how often would, even in such cases, our best intentions and admonitions be of no avail! how can the medical practitioner rescue from its wretched abode the child born in indigence and want, whose weakly frame, already contaminated by an unhealthy parentage, is exposed to the most effective causes of debility—bad air, bad food, and exposure to wet and cold! There are certainly a number of avoidable diseases; but to prevent the development of a great many of them, the powerful hand of the legislator must lend its support to the benevolence which the medical profession are ever ready to exercise.

There are in large cities, hothouses of scrofulous maladies, which as certainly send their supply to our hospitals, as the gardener sends the result of his artificial contrivances to market: remove and regenerate these, and it will not so often be the melancholy duty of the medical man to watch the progress of diseases which his best efforts and the most approved remedies cannot check. What is cod-liver oil, iodine, steel, bark, &c. &c., compared to the noxious influences which for years exert themselves on beings already predisposed to scrofula?—powerless weapons, which are mostly used because we possess no other, and the inutility of which, in a great many cases, none but hospital physicians and surgeons have so frequent opportunities to witness.

If these observations are founded on truth, as regards scrofula as transmitted from parent to child, the tendency becoming sooner or later developed, how much more forcibly do they apply to cases of congenital scrofula! Here the dark prospect is still more dreadful, and it is but seldom that the onward course of the disease can be hemmed. Two cases of this nature were lately treated at St. Thomas's Hospital; they were well calculated to show how completely congenital struma contaminates the system, and how, in particular, enlargement of the cervical glands (a pathological change not directly endangering life) may, by being carried to a great extent, bring the case very rapidly to a fatal issue, whatever line of treatment be adopted. We are indebted for the following details to Mr. Jardine, house-surgeon to the hospital.

T. P——, aged six years and a half, was admitted into Abraham's ward, under the care of Mr. Simon, with enlarged glands of the neck. He is a delicate and strumous child. Four of his brothers and sisters have died of phthisis. The cervical glands began to enlarge when he was two and a half years old, and have continued to increase in size gradually since that time, until one month before admission, when their growth became more rapid, so as materially to interfere with respiration. They at present occupy the whole of the neck in front of the edges of the trapezius muscle, dipping also underneath it, and behind the clavicles. The mass on the right side is larger than that on the left, overhanging, and almost resting upon the acromion process; encroaching on the median line, pushing the larynx and trachea to the left side, and producing by its pressure a loud tracheal ronchus with each inspiration.

The child has been lately subject to occasional attacks of dyspnœa; he has had a lengthened course of cod-liver oil, as well as iron, iodine, &c., but none of these remedies have been of permanent benefit. The only remaining resource, therefore, to avert the threatened danger of fatal dyspnœa was that of removing the mass by operation.

On July 12, 1851, chloroform having been administered, the operation was performed by Mr. Simon, on the right side only. A crucial incision was made, reaching in one direction from near the mastoid process to the acromion; and in the other from the lower part of the anterior edge of the trapezius to the median line; by this incision the external jugular vein was divided. The sterno-mastoid muscle was found thinned and stretched over the tumour, and was cut across; the omohyoid passed through the centre of the mass, and prolongations of the glands extended deeply in all directions between the cervical plexus and the deep muscles of the neck. The carotid sheath was bared during the dissection, and the internal jugular vein found so firmly adherent, that it was impossible to separate it. A considerable mass of glands, which were more superficial, and comparatively unconnected with surrounding structures, was then removed. Much blood was lost during the operation, and two or three vessels had to be tied. The edges of the wounds were brought together by sutures, strappings and a bandage.

The patient soon recovered from the shock of the operation, and breathed comfortably. He went on well for a time, the wound did not heal by adhesion, but the edges retracted, and part of the skin sloughed away, leaving a large granulating surface, from which there was much discharge.

On the evening of the 24th July, being twelve days after the operation, it was found that air escaped in bubbles from the lower part of the wound at about the centre of the clavicle, on the patient coughing or strongly expiring; the cough to which he had been subject became more troublesome, but there was no expectoration.

The chest was resonant, and the respiratory murmur could be distinctly heard over the whole of the cavity. It was evident that some ulceration had been going on in the wound, and by its gradual extension had caused local inflammation of the pleura, with adhesion of its opposed surfaces, and finally had opened into the lung itself. There was, of course, no help for this, but to trust to the healing of the wound. Beyond the occasional escape of air from the latter, and the solidification of the upper lobe of the right lung as evidenced by the physical signs, there was nothing of note during the remainder of the symptoms, but the patient, exhausted by the profuse discharge, and by diarrhœa, died on the 19th of August, about five weeks after the operation.

At the examination of the body, the wound was found to communicate directly with an abscess in the apex of the lung, about the size of a small walnut. Around this for some distance, and indeed throughout

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the whole of the upper lobe, the lung was solidified, and the evidences of pleuritis were confined to the vicinity of the abscess. The large vessels of the neck were pervious and healthy, with the exception of their adhesion to the remaining glands.

A somewhat similar case, as to the size of the glands, occurred in the hospital a short time back; where, however, ulceration of the mass had taken place, and the patient sank from profuse suppuration; and it was partly to avert this termination, as well as for the more immediate reasons before stated, that an operation was in this case determined on. The enlarged glands in both cases were examined microscopically, and no abnormal structure discovered, but merely hypertrophy of the natural gland elements.

It is but seldom that the removal of enlarged cervical glands is found advisable or necessary, but cases like the preceding will show very forcibly how difficult and even unwise it sometimes is to adhere to systematic rules. How many times has not tracheotomy been performed, though there was but a glimpse of hope! and it is certainly very sad to remain idle when suffocation is impending, although the benefit to be derived from an operation may not be looked upon as permanent. The issue of the case mentioned in the second place was well calculated to induce the surgeon to make an effort to avert the same consequences.

A feature of some interest is the subsequent formation of abscess in the apex of the lung, and the escape of air through the wound, although the deeper range of glands had not been interfered with. It seems that the inflammation and irritation excited about the part were quite sufficient to give rise to the pulmonary phenomena above described; but we have frequently had to notice very deep dissections about the neck without such complications occurring, and it may be supposed that the deep scrofulous taint existing in the subject, may have had a very large share in the formation of abscess in the upper portion of the lung.

GUY'S HOSPITAL.

Calculi in the Perinæum; Operation.

[Under the care of Mr. Hilton.]

Among the various phenomena to which stone in the bladder may give rise, there is one which has not, as it would seem, attracted a sufficient amount of attention. We allude to the passage of calculi from the bladder or urethra into the perinæum, from which region they may easily be extracted without laying open the bladder. If we endeavour to explain this phenomenon, we must either suppose that the foreign body passed by an ulcerated opening through the neck of the bladder or the membranous portion of the urethra, and lodged in the perinæum; or else that the stone so largely dilated the urethra as to bring the coats of this canal in immediate contact with the integuments and cellular tissue of the perinæum. Can the idea be entertained that the calculus is *generated* in the perinæum, as a deposit from urine which had gradually escaped in small quantity from an ulcerated opening of the bladder or urethra? We think not; for such an abnormal communication would, in all probability, give rise to severe symptoms before any concretion could take place.

As this subject is hardly alluded to in systematic works, we endeavoured to learn the opinion of some of our hospital surgeons: we found that some were inclined to think that the calculi reached the perinæum from the bladder or urethra by an ulcerated opening, and then formed a cyst; whilst others believed that the stones never left the urethra, but caused that canal to dilate until it came in contact with the superficial structures of the perinæum.

Whatever may be the cause of the peculiarity of which we are treating, it would appear that cases exemplifying this abnormal situation of calculi are not very rare. We find, for instance, in the Foreign Department of a late number of this Journal, a case under the care of M. Maisonneuve, of Paris. Here "the patient, thirty-six years of age, had been operated upon for stone [we presume in the bladder] at four years of age. He remained well for thirty years, after which, pain was felt in the perinæum, and the part being examined, a hard body was felt, which, on being extracted, was found to be a calculus. Four years afterwards, the patient again applied to M. Maisonneuve with the same symptoms, and another stone was extracted from the perinæum. *No urine escaped from the wound.*"

This latter circumstance is worthy of attention, for it is plain that no communication between the bladder or urethra and the perinæum could have existed at the time of the operation; and this was, therefore, not a case of dilated urethra, or sac communicating with that canal. It will be perceived by the outline which we subjoin, that with Mr. Hilton's patient, on the contrary, the urine passed through the wound for several days after the operation, so that it might safely be surmised that the stone ulcerated through the membranous portion of the urethra, which canal communicated with the perinæum at the time of the operation. A short outline of the case, for the details of which we are indebted to Dr. Aldred, will perhaps throw some light on the subject.

Reuben L——, eighteen years of age, was admitted into Stephen ward, July 10, 1850, under the care of Mr. Hilton. The patient presents all the outward characteristics of struma, and has of late been engaged in agricultural pursuits; he states that he enjoyed good health until three years before admission, when he became subject to incontinence of urine, which affection annoyed him so much after some time as to oblige him, about four months before he entered the hospital, to seek the advice of a surgeon. The latter passed a catheter several times into the bladder; these measures gave the patient much pain at first; this, however, soon abated, but the irritability of the bladder continued, until one day the patient passed, per urethram, without any previous discharge of blood, a calculus about the size of a horse-bean. This gave him agonizing pain for about two hours, attended with copious bleeding, and the hæmorrhage has more or less existed in a mitigated degree up to the time of the patient's admission. There were likewise difficult micturition, with constant desire to pass urine, the longest interval being ten minutes, a sense of itching at the meatus, and a sediment of viscid mucus and phosphate deposit in the urine. The patient's general health had of late been impaired, and his appetite was very bad.

Mr. Hilton proceeded to sound the bladder, and found that the instrument came in contact with a foreign body, which was supposed to be a stone, but not in that distinct manner which leaves no doubt as to the existence of a calculus in the bladder. It seemed as if something intervened between the sound and the hard body. Mr. Hilton now passed his finger into the rectum, and it became plain that the foreign body lay upon the bowel in front of the prostate gland. Some doubts were therefore left whether there might not be two stones, one in the bladder, the other encysted in the perinæum, after having passed through an ulcerated opening of the urethra. It should, however, be noted that defæcation was performed without obstruction.

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Mr. Hilton prescribed twenty minims of tincture of hyoscyamus and thirty of liquor potassæ, in linseed infusion, to be taken twice daily, with a view of diminishing the irritability of the bladder, and the patient was ordered a good diet and porter. The draughts had certainly the effect of improving the vesical symptoms, for the urine could, in about a fortnight, be retained for three quarter of an hour; it was, however, still mixed with a little blood and viscid mucus, and the painful titillation at the glans continued. The general health having materially improved, Mr. Hilton resolved, about one month after admission, to perform the operation of lithotomy, using a curved staff, so as to allow an assistant to hold the instrument while the operator was engaged in searching the perinæum. Mr. Hilton expected to find the stone in that region, but there was a doubt whether there might not be another in the bladder.

When the patient had been well secured and narcotized by chloroform, Mr. Hilton made the usual incision on the left side of the perinæum; this was followed by very profuse hæmorrhage, with blood issuing by the side of the sound, through the meatus, This was sufficiently considerable to induce Mr. Hilton to secure the wounded vessels (probably the inferior hæmorrhoidal and the superficial perinæal) before proceeding any further. When the loss of blood was arrested, the incisions towards the neck of the bladder were continued, and the operator's knife was made to cut upon the staff somewhat in front of the prostate gland and the cyst containing the calculous matter. The forceps being now introduced, came in contact with a mass of brittle calculi, which were evidently lodged in the perinæum; these were then removed, somewhat broken up, without the neck of the bladder being opened. Mr. Hilton now moved the sound in the bladder in such a manner as to detect the second stone which was suspected to be in that viscus, but neither Mr. Hilton nor any of his colleagues could detect such a foreign body.

The patient was then conveyed to his bed, and on the next day some remains of the friable calculus were thrown off from the wound with the urine, and this secretion was for the whole of the following week charged with calcareous deposit. A large piece of organized lymph, apparently covered with calculous debris, was likewise extruded, and this mass was thought of sufficient pathological interest to be put up as a preparation for the museum. The healing process was rather slow, as it was only on the twenty-first day after the operation that the urine partially passed through the meatus; it was then very cloudy, and chiefly loaded with phosphates. The patient complained of pain in his loins, but the urine contained no albumen.

About one month after the operation, the urine ceased to appear at the wound, which latter was granulating very satisfactorily, and a fortnight after this (six weeks from the operation) Mr. Hilton sounded the patient, and experienced that sensation which is generally conveyed by a stone in the bladder. As this foreign body seemed to produce no inconvenience Mr. Hilton advised the boy to repair to the country, and there completely to recruit his health. He was therefore discharged, October 5, 1850, about three months after admission.

Towards the latter end of January, 1851, the patient applied again at the hospital with about the same symptoms as were noticed on his first admission.

Mr. Hilton performed the same operation as in the first instance, and a calculus composed of phosphate of lime with a nucleus of urate of ammonia was removed from the perinæum. Nothing worthy of record took place during the patient's second stay in the hospital, the wound cicatrized again as before, and he was discharged in the space of about two months, before the wound was completely healed, as phlebitis was reigning in the ward.

Every circumstance and incident connected with this case affords food for reflection, and the very obscurity which hangs over some of the phenomena that were presented, is calculated to attract the attention. With the facts which have been stated above, our readers will doubtless form an opinion of their own; it is but right, however, that we should state that Mr. Hilton considers that a regular pouch or sac was formed in front of the prostate gland after ulceration of the urethra, into which sac the calculi passed.

Cases in some respects analogous to the preceding have occurred, where the pathological changes consisted in the dilatation of the urethra, or the formation of a cyst after rupture of that canal, and it has happened that this dilatation was carried to an enormous extent. Mr. Paget very courteously pointed out to us a preparation in the museum of St. Bartholomew's Hospital, which forms a striking illustration of this swelling out of the urethra. It is placed under No. 161, series xxxvi., and consists of between twenty and thirty calculi, of rounded form and grey colour, the largest about the size of a nut. The following explanation is given in the catalogue. "Part of 146 calculi removed from a sac connected with the middle of the spongy portion of the urethra. It was not certain whether the sac was formed after ulceration of the urethra in the tissues around it. They were fusible calculi with thin layers of urate of ammonia. Operation by Mr. Vincent. The patient was a man thirty-three years of age, and had been for ten years subject to incontinence of urine, the consequence of a kick, by which the urethra was ruptured or otherwise injured. He was in the habit of wearing a yoke to compress the anterior part of the urethra. Six years before the removal of the calculi, he had been bleeding from the urethra for several days, and then first perceived the swelling in the perinæum, which from that time gradually augmented with the increase of the calculi. The rest of the stones are in the Museum of the Royal College of Surgeons."

NEWCASTLE-UPON-TYNE INFIRMARY.

Case of Fungus Hæmatodes.

(Reported by THOMAS JOSEPH TURNBULL, Dresser.)

J. S., aged 34, from the North Riding of Yorkshire, was admitted a patient into the Newcastle-upon-Tyne Infirmary, (under the care of Sir John Fife,) on the 24th April, with a large tumour, extending from the ilium to the lower third of the femur. She says she received a blow from a piece of wood five years ago, on the seat of the tumour. This swelling gradually increased in size, accompanied by frequent lancinating pain. She says she has, in general, enjoyed very good health. On the fifth day after her admittance into the hospital, a consultation was held, and the removal of the tumour decided upon. Being placed under the influence of chloroform, Sir John Fife commenced the operation by two elliptical incisions, beginning a little below the anterior superior spinous process of the ilium, and extending down the outside of the thigh about fifteen inches; the integument included was about four inches broad between the centre of the incisions. Under the fascia a very thick cyst came into view. The scalpel was passed through at one extremity to confirm the opinion formed of the contents, which were medullary with grumous blood. The cyst was then dissected entire from the sartorius muscle, the vastus externus, and lastly, from the femur.

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Eight arteries were tied, and the wound brought together by sutures. Since the removal of the tumour, the symptoms of constitutional disturbance have not been more severe than expected from so extensive an operation. The wound is now a healthy, granulating surface; and the patient will shortly be able to leave the hospital. The nature of the disease precluded all hope of success, but from the circumstances of the inguinal glands appearing free from disease, and the tumour being, as it were, confined and circumscribed by a dense cyst, which was dissected out entire.

Foreign Department.

Unsuccessful Transfusion of Blood in a Case of Anæmia.

M. Monneret has recently communicated the following case to the Academy of Medicine of Paris:—A woman, twenty-eight years of age, was admitted into the "Hôpital Beaujon" on the 4th of October, 1851, with severe symptoms of anæmia and scurvy. The patient had from childhood been subject to frequent hæmorrhage, but the loss of blood was now confined to the uterus and the formation of petechiæ. There was a certain amount of obesity, the mucous membrane was everywhere extremely pale, and various parts of the body were covered with ecchymoses. The weakness was extreme, the viscera appeared healthy, there was complete anorexia, constipation and tympanitis.

The debility increased rapidly, notwithstanding the liberal administration of tonics and stimulants, and on the second day after admission the patient was dying. M. Monneret, looking at the alteration of the blood as of a primary character, and independent of any visceral disease, resolved to try transfusion. Four ounces of blood, deprived of fibrine—in other words, the serosity and globules with the elements which are held in solution in the former, were continuously injected with hardly an interruption of two minutes. Some exeitement and improvement were produced for a short time; the patient took some wine with pleasure; but these favourable symptoms did not last long; she gradually became weaker, and died the same night in the manner of consumptive patients. The autopsy revealed no alterations but such as are common to anæmia; nor did the blood, before or after death, present any change as to the fibrine or globules. The author thinks that the patient died in consequence of the stupefaction produced by the transfusion, and strongly condemns the operation, though it had been devised by himself. The blood had been defibrinated to prevent the bad effects which coagulation of the injected fluid might produce.

A New Remedy for Intermittent Fever.

It will be recollected that a plant, called cedron, was lately brought back from South America, as very efficacious against rabies. Hercin, however, it has been found powerless. But M. Lewy, who has just returned from South America, has brought with him, among other curiosities, some of the root of the cedron, which, though unsuccessful in rabies, has been found particularly serviceable in ague, in the dose of between seven and fifteen grains per diem.

Trephining for Caries of Bone.

M. Jules Roux, chief surgeon of the naval department at Toulon, has published, in *L'Union Médicale*, a few cases which would tend to show that among the various means usually employed to arrest caries of bone, trephining should not be neglected. He had employed the trephine at the base of the petrous bone, which had been carious for several years. When a circular piece of bone had been removed a deep cavity was laid bare, in which the index finger came in contact with the meninges. The case did well, and good results were also obtained in a second, where trephining was used upon the canine fossa of the superior maxilla, after the soft parts had been dissected and thrown upwards. Trephining is pretty frequently used in this country for facilitating the removal of necrosed portions of bone, but seldom for mere caries.

Rheumatic Inflammation followed by Suppuration.

M. Becquerel has recently brought the following case before the Medical Society of the Hospitals of Paris. An attendant at the hospital of "La Pitié," forty-five years of age, who had never been seriously ill, was suddenly seized with febrile symptoms, and two or three days afterwards swelling and pain attacked the ankle-joint on the right side. He was given twenty-two grains of quinine, and this dose was repeated the next day. On the second day after the seizure the pain and swelling had much diminished, but on the third and fourth day, the right knee swelled and became very painful. The quinine was now continued for two days, but as no improvement was noticed, the patient was bled, and leeches were applied to the knee. Mercurial frictions were subsequently had recourse to, but with no abatement of the symptoms; the man became, on the contrary, much weaker, and died fourteen days after the onset of the disease.

No general inspection was made, but the articulations which had been attacked were examined. The ankle, which had suffered first, was perfectly sound, but the knee had undergone severe pathological changes: the ligaments were partially destroyed, the synovial sac was full of pus, and this fluid had burrowed as far as the superior third of the thigh. These purulent collections might have filled a tumbler. M. Becquerel thought this case of importance, as the patient had never suffered from any previous affection, and because there existed no abscess about the frame which might suggest the idea that the pus had been absorbed and deposited in the knee. We must, however, observe that there is no certainty on this head, as the whole body was not examined.

Syphilization.

Here is a new term, and well may a new term be used, for the fact to be conveyed is quite new; but whether what is called syphilization is a good and allowable thing, is very questionable. Our readers are aware that Dr. Auzias Turenne, of Paris, succeeded some time ago in grafting syphilis upon animals, a result which had in vain before been sought. Monkeys were the poor creatures experimented upon; and it would appear that they actually and truly were made to contract syphilis by means of inoculation.

This success seems to have given Dr. Turenne a taste for inoculating; he went on experimenting, and at last found out that the syphilitic virus, like that of variola, may, by being inoculated upon a perfectly healthy person, preserve that person from any further attack of syphilis, although the patient may get in the way of taking the disease; this taking place in the same way as inoculation of the pus of small-pox sometimes preserves from any further onset of the disease. Cases are of course brought forward to strengthen this position.

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But Dr. Sperino, surgeon to the venereal hospital of Turin, has gone still further. He has first fully confirmed Dr. Turenne's conclusions, in acting upon FIFTY-TWO of his patients; these were mostly affected with primary or secondary symptoms. The inoculations used to be made on the abdomen, and the spot covered with adhesive plaster, so that none of the virulent matter should be lost. Chancres were almost always produced, and they were allowed to heal without cauterization, the pus having been taken either from the patient herself, or from another, where the chancre happened to be in the progressive stage

Further inoculations, after the first had succeeded, yielded no result; and though Dr. Sperino went on placing virulent matter in the canal of the urethra, close to the anus, or on the vulva of women previously saturated with virus, he found that it would no longer take. The patients, by being artificially syphilized, had in fact become proof against syphilis.

But not content with establishing this law (?) Dr. Sperino has formulated another; viz. that virulent inoculations are not only *prophylactic* but *curative!* All or nearly all the women who were inoculated, got rid either of the recent ulcers with which they were affected, or of chronic ones which had resisted mercury, iodine, &c. Thus it would now appear that infection need not any longer give people uneasiness: let them have the courage to get inoculated, and they are mailed against the syphilitic poison. Or if they should have any recent or chronic chancres upon them, let them again have recourse to inoculation, and they will not only be henceforth invulnerable, but they will also see their present symptoms disappear promptly. This discovery will certainly have a depressing effect on the sarsaparilla trade.

Fish-Oil in Rickets.

Dr. TROUSSEAU, physician to the Children's Hospital at Paris, speaks very highly of the different fish-oils,—viz., cod, ray, shark, whale, &c.,—for the treatment of rickets; but cod-liver oil is the variety which Dr. Trousseau prescribes most frequently. Rapidly-increasing doses, never exceeding one ounce and a half, taken for two or three months, have cured children of one and two years, who could not walk, and whose limbs were bending under them. Dr. Trousseau has found tubercles, scrofula, and tabes mesenterica, to resist the administration of the cod-liver oil; herein, however, we must say that his experience does not harmonize with that of many practitioners of this country. Cod-liver oil has been for a long period of time a common remedy on the coasts of the Baltic for ricketty children. It is said that a Dutch gentleman went to settle at Tours, in France, in 1826, when one of his children began to suffer from rickets. M. Bretonneau, who was consulted, gave the child salt-water baths, without good results. The father then stated that he had cured other children of his with fish-oil in his native country; it was again tried in this case, the child recovered, and hence the introduction of the remedy.

Case of Croup, with Extension of the Pseudo-membranous Exudations to the Last Bronchial Ramifications.

M. MOREL LAVALLEE had lately an opportunity of making the inspection of a little girl who died of an attack of croup at the age of four years. The autopsy proved that tracheotomy would not have been of any avail, for it was evident by examining the lungs, which M. Morel presented to the Surgical Society of Paris, that the fibrinous exudations had penetrated the very last bronchial ramifications. We shall here subjoin a few figures relative to croup and the operation of tracheotomy, as published by M. Trousseau in *L'Union Médicale*. Up to the 23rd of August, 1851, M. Trousseau has performed tracheotomy 169 times; 11 times for chronic diseases of the larynx, and 158 times in cases of croup. Out of these, 43 patients, a little more than one-fourth, have recovered.

The French Medical Societies.

One of these societies (of the second district of Paris) has lately started the project of forming over the whole kingdom a kind of semi-official committees, the members of which should be elected by their brethren. These committees would keep annual registers of the duly-qualified practitioners of their locality, and prosecute such persons as illegally practise medicine. Their duty would likewise be to watch over professional dignity and interests, and they would have the power of censuring the members of the profession who commit irregularities. They will be allowed to interfere in courts of justice, when professional credit is at stake, and will, lastly, act as a conciliatory body whenever any difference occurs between a medical man and his patient, with a view of avoiding judicial proceedings. The government is to be applied to immediately, and it is intended, when the sanction is obtained, to set actively to work. We heartily wish our French brethren success, and beg to add that in all countries we should remember that "L'union fait la force."

Medicine among the Arabs of Algeria.

Dr. JACQUOT has published, in *L'Union Médicale*, peculiarities of medical practice which he witnessed in Algeria. From his sketches we gather that small-pox makes great ravages among the people; hundreds of individuals are met with, covered with cicatrices and seams, or blind of one or both eyes, in consequence of this malady. The Arabs are acquainted with the powers of inoculation, but they use it very rarely; when they have recourse to it, they introduce the variolous virus between the thumb and index finger. When the disease is fully established, the native doctors are content to employ unctuous applications of oil and honey. Insanity is much rarer in Algeria than in France; insane people are looked upon as inspired individuals, and their incoherent expressions are collected like oracles. Wherever they present themselves they are given shelter and food, and their whims and long discourses are tolerated for fear of annoying them. They wander freely about the streets sometimes in a state of complete nudity, and as satisfying their wishes is looked upon as a meritorious act, people refuse them nothing.

The tebih, or Algerian doctor, never interferes in parturition, the most difficult cases being given up to ignorant matrons. A woman in labour takes two points of support: one with her feet against a bar, and the other with her hands, which are made to seize a rope fixed on the ceiling or the roof of the tent. If the labour proceeds too slowly, the kabla (midwife) presents to the patient a disgusting draught, composed of the most fœtid excrements and shreds of putrified horse-flesh; hardly has the patient tasted it than she turns sick, and the uterus contracts synergically. Sometimes the matron places herself behind the patient, who is sitting down, throws her arms around her, and tosses her backwards and forwards; she then kneads the abdomen violently, and even mounts upon it. Mr. Furnari mentions a still more savage custom: a hand-mill is made to work on the abdomen of the poor woman, with the hope that its weight and movements will excite the uterus. The matrons often encircle the body with folded napkins,

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and pull them so as to bring the uterus downwards, and the midwife titillates the neck of the organ with her finger dipped into a substance, the nature of which Dr Jacquot was not able to ascertain. The umbilical cord is generally torn, and the expulsion of the placenta left to nature. The matrons, particularly those of the Jewish persuasion, often undertake to procure abortion for young girls. It is supposed that two or three pinches of henna leaves* in a quart of boiling water is an excellent medicine to provoke miscarriage.

Scabies and tænia are very common among the Arabs, especially in children; but puberty has been noticed to modify these affections in a salutary manner. The medical men of the country use irritating applications against scabies, sometimes a black and very alkaline soap, which dispels the disease very rapidly. Tænia would be much more tenacious if it were not the custom to keep the head shaved; the actual cautery, tar, common salt, vinegar, &c. &c., are used against that affection. It is interesting to observe that the Arabs have followed, in the name they give to scrofula, the same analogy which has prevailed among us; they call it khranzir, which literally means a sow. The doctors attribute the generation of scrofula to the larvæ sometimes found on the sores, like the Brahmins of Hindostan, who attribute all cutaneous diseases to worms (Sprengel).

When an Arab suffers from headache, he gets his forehead and scalp scarified; and if there is no one at hand to do this for him, he tears the space between the eyebrows with his own nails. The Moorish hot-air baths, with rubbing and kneading, seem to do good service in rheumatismal affections, particularly when of the chronic kind. Women are very fond of these baths, and often use them much too frequently; some cutaneous affections are benefited by them, whilst others are made a great deal worse; and flaccidity of muscle, as well as a general atonic state, are often the result of them. Thermal springs are very numerous in Algeria, and their properties are fully appreciated by the natives. Many of the hot and mineral wells attract a large number of patients affected with incurable diseases; but they do not bathe in the waters; they merely use ablutions, or stay a variable time in rooms filled with the vapours of the thermal spring; they likewise drink ferruginous and saline waters. The doctors of the country (tebibs) recommend the use of the mineral waters in chronic rheumatism, old wounds, inveterate skin diseases, debility, and affections resulting from marsh fevers and dysentery. The ignorant Arabs do not, however, attribute the efficacy of these waters to their saline constituents, but to the intercession of the marabout, who gives his blessing to the springs, and attaches his own name to them.

A Fluid recommended as a Preservative from Syphilis.

M. Langlebert lately stated to the Academy of Medicine of Paris, that he had discovered a compound which, judging from the success of his experiments, would effectually preserve from syphilis. The following is the formula: Alcohol, one ounce and two and a half drachms; soft soap with stripes and prepared with potash, the same quantity; dissolve and strain, then add essential oil of lemon, five drachms. M. Langlebert mentioned the following experiment:—

He took purulent matter from a chancre with a hard base, and inoculated the left thigh of one of his pupils, who had volunteered his services. On the other thigh the inoculation was performed in a different manner: the lancet dipped in the same pus was made to scrape the skin and make it *raw*, so as fully to ensure absorption; after five or six minutes the preservative fluid was applied on this right side! and this was repeated three or four times. The usual effect was the next day perceived on the left thigh, but the right, where the prophylactic fluid had been applied, presented only a thin and dry crust. On the third day, the pustule on the left thigh was cauterized with strong nitric acid. A public experiment has since been made upon two other pupils, who had requested the *favour*, as well as upon M. Langlebert himself, and the success was complete. M. Ricord is to report upon this new prophylactic.

A Clay Pipe Swallowed, and finally ejected per anum: Death.

M. Gosselin, a few days ago, brought before the Surgical Society of Paris the following extraordinary case:—A man, thirty years of age, of a pretty strong constitution, had of late made it a trade to swallow various objects for small remunerations. About two months ago he wagered that he would swallow a clay pipe; the latter was of the ordinary size, about three inches and a half in length; it had only been smoked four times, and contained no tobacco. He had no difficulty in swallowing the foreign body; but as soon as it had reached the stomach, severe pain was felt and vomiting and diarrhœa came on.

The patient sought relief at the hospital of the town of St. Germain, but he obtained no relief during the fortnight he stayed in that institution. He was now advised to go to Paris, and was admitted at the Hôtel Dieu, where M. Gosselin tried in vain to put a stop to the vomiting and diarrhœa. The man was becoming very weak, and looked very much like a patient dying of phthisis; the tongue was red and dry, and the sickness recurred five or six times a day. M. Gosselin felt very much embarrassed. In consulting systematic writers, he found that Hevin had removed foreign bodies from the stomach by the operation of gastrotomy; but as to the method to be followed when the foreign substance is lying in the intestines, he discovered only a few precepts, but no facts.

By careful percussion with the plessimeter, dulness was discovered in the right iliac fossa over a space of about two or three inches; no gurgling nor tumour was observable on the spot, and it was very probable that the pipe had reached that region. On the next morning this dulness had disappeared, and in the course of the same day the clay pipe was evacuated per anum, quite intact, with the tube unbroken. The system had, however, been very severely tried, and the patient sank five days after being freed from the foreign body. No trace of redness or congestion was found in the stomach or the small intestine, but in the colon numerous ulcerations were observed, some quite recent, and others completely or almost cicatrized. Membranous exudations covered the convex surface of the liver and the inferior aspect of the diaphragm. In the chest, traces of pleurisy and pneumonia were discovered.

Magnesia an Antidote of Salts of Copper.

M. Roucher mentions, in the "Gazette Medicale de Strasbourg," some experiments of his which would tend to prove—1. That calcined magnesia arrests the

* Henna-Lawsonia, a genus of plants of the natural family Lythrariæ, which, consisting only of one or two species, may be found in most Oriental regions in garden or in field cultivation. Lawsonia inermis is said by Oriental travellers to be used by the Arabian women in dyeing their nails and the tips of their fingers, as well as the soles of their feet, of an orange hue. It is also used by the men for dyeing their beards, the orange colour being afterwards converted to a deep black by the application of indigo. The Arabic name of the plant is Aenna.

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symptoms of poisoning by sulphate of copper, when it is administered soon enough after the ingestion of the salt. 2. That the dose of magnesia requisite to neutralize the effects of the sulphate, is at least eight parts of the antidote for one of the poison. 3. That inasmuch as magnesia comports itself with the other salts of copper in the same manner as with the sulphate, it is extremely probable that magnesia will prove an efficacious antidote for all the salts of copper.

On the Generation of Water in Diabetes.

Professor Nasse, of Boon, has lately made a very interesting discovery touching the generation of water in diabetes. It is well known that three hypotheses have been offered to explain the disproportion between the amount of liquid ingested and that of the urine. This disproportion was first attributed to a liquefaction of the solids, then to a kind of imbibition and absorption of the skin, or lastly it was supposed that water was formed within the vessels, by the combination of hydrogen and oxygen. A fourth possibility existed—namely, that patients deceived their medical attendants, and procured beverages by stealth. Dr. Nasse lately put the last hypothesis to the test. He locked up two diabetic patients, who passed more urine than they ingested fluid; and he found by weighing carefully every kind of aliment they took, that the origin of the water which was searched for in the mysterious elaborations of the economy, was merely the neighbouring fountain.

Hysterical Imitations.

Contagion by the force of imitation has been frequently noticed. An example occurred lately in the Lying-in Hospital of Madrid. A woman was seized with eclampsia, whereupon two or three others evinced the same symptoms. Dr. Corral caused the ward to be cleared, and the patients at once recovered.

NEW MAGNETIC INDICATOR OF FOLLY.—GLOBULISM IN DIFFICULTIES.

Generally does it happen that the persecution of any genuine faith or principle calls forth an heroic adhesion to the faith attacked, and the advantages ultimately rest with the persecuted rather than the persecutors. So the opposition to any fact or principle in science is pretty sure to excite new attention to the disputed points; and truth, taking care of her own, produces new discoveries and investigations confirming or refuting the matter. But in the case of attacks made upon folly and imposture, the issue is happily different: the fool is driven to greater folly, the knave to greater deceit, and the severer the attack the more certain is it that the stupidity and fraud exhibited in times of unguarded excitement will reach such a height as to cover the actors with confusion and shame.

It will not be denied, especially by homœopaths, that our attacks upon globulism and globulists have been constant and severe. It will be admitted that the proceedings at Brighton were a heavy blow, and that the general indignation and contempt of the profession have rested upon the Hahnemannic quacks and their abettors. Let us now pause to look at the results. Are the globulists more united, fervent, and enthusiastic than ever? Have any brilliant discoveries been elicited, shedding light upon the action of infinitesimals? Or have folly and fraud only been rendered more complete and unmistakable? The globulists themselves have cried the old cry of Persecution! Persecution! and they have recently declared that a discovery, unequalled in modern times, has arisen to avenge the injuries they have sustained, and to put back upon their opponents the confusion with which homœopaths and homœopathy were to be covered. It is but fair that we should endeavour to give some account of this subtle and unparalleled invention, which has shed so great a glory around the writings and practice of Hahnemann, and which has, according to certain great authorities, afforded most triumphantly the physical proof—the last thing wanting—of the action of infinitesimal doses upon the human body.

Some weeks ago, a Mr. Rutter, of Black Rock, Brighton, but of whose existence the scientific world was not previously aware, in consequence of the remote region in which he lives, delivered a lecture on a new instrument of his own construction, capable of showing wonderful things in animal physiology, and the influence of the minutest portion of matter upon the living orgasm. Here was a gift of incalculable value to the maligned followers of Hahnemann. A wretched publication in the service of the quacks, heralded its advent in the following glowing but modest terms:—

"Most of our colleagues are by this time aware that Mr. Rutter, of Brighton, has recently invented an instrument, which, besides its vast importance to the science of magnetism in all its forms, holds out the means of *demonstrating* the fact that the homœopathic medicines do act on the human organism. This is a discovery which would have gladdened the heart of Hahnemann had he been in the life of the body: this instrument which affords the means of proof of a fact the opponents of homœopathy have always rejected without inquiry, has been discovered at a most opportune time. We suppose Professor Christison will now change his opinion of homœopathy, and having changed it, will lose no time in avowing that he has done so.

"Drs. Quinn and Madden are entitled to the best thanks of all who are interested in the progress of homœopathy, for having brought the subject of this important discovery before the homœopathic practitioners. It is our pleasant duty to announce it to the homœopathic public. The experiments with this instrument, in proof of homœopathy, can be made, when Mr. Rutter has made it public, as well by non-medical as by medical men, provided always they have the necessary patience and knowledge. The investigation conducted by non-medical inquirers would add great weight to the testimony of medical men. We trust Faraday will take the subject up; and that every chemist, who deserves the name, will do likewise.

"It is Dr. Madden's good fortune to live at Brighton; and of the homœopathic practitioners, he was the first to see Mr. Rutter's instrument and experiments.

"The Earl of Belfast, a friend and supporter of homœopathy, no sooner saw the instrument and some of the experiments, than he also at once saw its applicability as a test of the homœopathic doses of

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remedies; and it seems that any one, medical or non-medical, who sees the instrument and some of the experiments, cannot fail to discern at once that applicability.

"We heartily congratulate Mr. Rutter on his happy discovery and brilliant invention; and we trust that he will as soon as possible publish his intended book on the subject. All persons interested in magnetic science, and in homœopathy, will eagerly look for its appearance. This has, indeed, been a very important year for our cause."

The same number of this stupid journal contains the report of a lecture delivered by Dr. QUIN at the "London Homœopathic Hospital," in the presence of the "British Homœopathic Society," that cautious and eminently philosophical observer, "the Earl of BELFAST," and, as we are further told, "several allopathic practitioners." To this learned audience, the homœopathic oracle unfolded the properties of the "New Magnetic Indicator," and described its construction in terms far too lucid to admit of quotation. All greatness in science is characterized by simplicity, and the "New Magnetic Indicator" is thus composed:—A wooden stand is fixed to a table; from this rises a perpendicular pole, with a horizontal brass rod projecting from its summit; at the extremity of the rod there is a delicate forceps, which grasps a thread of silk, the thread holding in suspension a little pendulum of sealing-wax. The bit of wax is surrounded by a glass shade, and is suspended over a small dial-plate, marked out, somewhat after the manner of a compass, with the letters A B C D E F G H. The operator puts his finger, or finger and thumb, upon the top of the perpendicular pole, to which the brass rod is attached, when the pendulum makes a variety of definite movements over the face of the dial-plate. These movements are described as modified in an extraordinary manner by the sex of the operator, the substances held in his hand, and a variety of other singular circumstances. But we must refer to the magniloquent QUIN himself for an account of this wonderful invention; or rather, we shall select its most prominent and miraculous qualities from his lecture; to give them all would be, indeed, an impossible task. Dr. QUIN tells us that—

"By means of this instrument, the inventor has been enabled to discover, not only the various normal effects of the different electrical currents which exist in the body, but likewise a variety of modifications and changes which these currents undergo, when the hand of the operator is brought in contact with the thumb, index or hand of another person; with inanimate matter, with a variety of different metals, with vegetable and animal substances; also the alterations which different medicinal substances produce upon these currents. Mr. Rutter is not only able to demonstrate, in the most satisfactory manner, the polarization of our bodies, *and those parts where the north and south poles are situated*, but likewise the alterations which take place from change of position, from the vertical and sitting position to the recumbent, as also those which take place from other circumstances hereafter to be mentioned.

"He is also able to demonstrate most clearly the difference between the male and female currents; and that the latter are generally in an inverse or antagonistic state to those of man; also, that certain positions of the arms and hands arrest the effects of these currents upon the instrument.

"Dead animal matter, brought into contact with the hand of the operator, or with any person, or any number of persons forming a chain by holding one another by the hand, *the one nearest the operator holding his hand, and the dead matter being put into the hand of the person most remote from him*, almost immediately stops the movements produced on the instrument by the electric current. Mr. Rutter has, however, carried his discoveries still further; for he has ascertained, and is able to prove most unerringly, that noxuous matter, whether animal or vegetable effluvia, or miasms, or mineral or vegetable poisons, in fact, all substances capable of producing death, have the same power of stopping the action of the instrument, as I have just described dead matter to have. All the experiments were conducted in the most simple and unpretending manner, and were explained in the most lucid and unequivocal language. They were repeated *over and over again*, at the wish of several of the persons present, and the results were each time *unvarying and unerring*, so as to carry conviction to all who witnessed them, even the most sceptical.

"Mr. Rutter, who is a man, as you may suppose, *of great scientific knowledge, leaves no loophole for scepticism*; the beautiful series of experiments made by him all tending to corroborate and affirm one another. *The instrument is so subtle, and the demonstration so clear, whilst the experiments are at the same time so delicate and exact, the same cause repeated invariably producing the same effect, that no one can resist the positive evidence of the undeviating action of this scientific and truly philosophical instrument.*"

This staggering exordium is fully borne out by the recital of the individual experiments. We pass over the description of the unerring gyrations performed when Mr. RUTTER placed his finger on the instrument, or when he used both finger and thumb; when he held it lightly or grasped it firmly; when Dr. QUIN put his index finger upon Mr. RUTTER'S hand, and when he changed the index for the thumb: and pass to still greater marvels, which to Dr. QUIN are only "curious" and "interesting." We beg the particular attention of our readers to the wonderful "fly":—

"Another curious and interesting phenomenon was now demonstrated by Mr. Rutter. If a person of the female sex puts the *index or forefinger* on the operator's hand, the pendulum, instead of moving as when the index of a male is in contact with the hand, from D to C, moves from B to A. When the *female thumb* touches the hand of the operator, instead of moving from B to A, as in the case of the male thumb, the pendulum immediately moves from D to C; and when the whole hand of a female is placed on the hand of the operator, the movement becomes circulatory in the direction of from B round to G,—that is, from right to left, the exact reverse of the normal motion.

"The next experiment was one of great interest, and exemplified in a beautiful and *indisputable* manner the experiment to which I alluded in a former part of the evening—viz., the instrument being stopped by the operator when put in contact with dead animal matter. After having put the instrument in full normal action by applying the finger and thumb of the right hand, *a dead fly* being put on his left hand, the motion of the pendulum immediately *ceased*; on

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the fly being taken away, the motion *recommenced*. A chain of several men, holding one another by the hand, was formed; a female placed her hand on that of the man most remote from the operator; the motion of the instrument was immediately reversed, the circulatory motion being from right to left. *A dead fly* was then put upon the left hand of the female, and the motion immediately *stopped*.

"A wire of copper, 500 feet long, encased in gutta percha, was then added to the chain of men—the one farthest from the operator held one end of the wire, and the female the other end; the *female influence* was immediately sent through both the wire and chain of men, and a corresponding action was again set up, which was again *stopped* immediately by *the dead fly* being put upon the other hand. Similar experiments were made with other dead matter, even merely by holding the hand *over or near the dead matter*, the *aura* of which equally stopped the motion."

But these experiments are coarse and grossly material, compared with some of those which follow. When the pendulum had been stopped so as to remain perfectly motionless, the slightest causes were sufficient to set it again in motion on a new and, of course, "interesting" tack. Dr. QUIN tells us with the most perfect gravity that,—

"If a person of the female sex *merely breathes* upon the hand of the operator, it immediately *changes* the current to the female; if a man *breathes* upon her hand, her other hand being in contact with the operator, the *male influence is immediately perceived* on the pendulum. If a *hair of a female* is placed on the hand of the operator, or the hand of *the last of any number of men in contact with him*, the female current is immediately produced. The same phenomenon is produced by a pocket-handkerchief worn by a lady.

"The next set of experiments performed by Mr. Rutter were to prove the polarization of the body.....

"If one hand of the operator is put to the back of the head of a person standing near him, the current is normal, but if put to the forehead, the motion immediately ceases, *proving* the south and north poles to be in the back and fore part of the head. If the hand is then put on the *right* shoulder, the action is normal, but if on the *left* shoulder, the action is reversed, and acts as the female current. In the recumbent posture the north pole *leaves* the forehead, and *takes refuge* in the diaphragm. Bringing the hand of the operator in contact with the forehead no longer now stops the instrument, but if he places the hand over the diaphragm, the motion immediately ceases.

"Another extraordinary fact is, that the magnetic currents are reversed below the pelvis, the *right leg* having the same action as the *left arm*, and the *left leg* the same action as the *right*. Again, these change when the body is vertical, and when it is recumbent. These experiments were most satisfactorily *proved over and over again*, on different individuals in the upright and recumbent positions."

We trust our readers have followed the Quinian narration with the care which it merits. They must perceive that FARADAY is truly an insignificant personage in comparison with the immortal RUTTER. It was indeed a compliment to ask the one to verify the eminently philosophical researches of the other.

After the experiments with "the dead fly," the single "hair of a female," and the proofs of the migratory "poles" of the human body, Dr. QUIN proceeds with a truly Homeric enumeration of the transports witnessed in the pendulum when the operator took into his hand considerable pieces of the various metals and other chemical substances. Each had its specific action upon the pendulum, and all are methodically recorded by the lecturer in clear and convincing language. It must indeed have been a criminal incredulity if any of his hearers could have doubted the motor properties of tin, or copper, or zinc, or platina, &c., when brought to bear upon the "New Magnetic Indicator."

Mr. RUTTER, innocent man, knew nothing of globulism, but that wise and good nobleman, the Earl of BELFAST, immediately saw that if, with the "magnetic indicator," "a dead fly" might influence the whole human body, or if a single "hair of a female" could electrify an army of "any number of men," the potent influence of a globule upon the orgasm would certainly stand revealed. "Pray test some globules of arsenic upon the instrument," cried his lordship! Here Dr. QUIN must speak for himself, for we approach the birth of a great and certainly of an unknown era in medicine and science:—

"Well, one globule of *Stannum*, of the fourth attenuation, was placed by me in the palm of the hand (*that being the most sensitive part*) of Mr. Rutter, after he had set the instrument in action. The pendulum went immediately, moving from B to A with as quick and as strong a motion as when the same metal in mass was put into his hand."

Here Dr. QUIN might well have cried out "Eureka," or have lost his breath. He didn't do either. The frigid and unimaginative experimenter methodically went on with the description of the way in which other globules conducted themselves when brought into relation with the "New Magnetic Indicator." In this track we follow his sedate example:—

"One globule of *Mercur. sol.* 12, changed the action, and the pendulum went from H to E.

One globule of *Cuprum* 30, reversed the normal action, and produced the reverse current.

One globule of *Zincum* 30, sent the pendulum from H to E.

One globule of *Zincum* 200, did the same.

One globule of *Zincum* 200, dissolved in one ounce of water, and a *drop* of this solution put into Mr. Rutter's hand, produced exactly the same result, both when the instrument was in repose and in action.

One globule of *Ferrum metallicum* 6, gave exactly the same elliptical motion described above as produced by the *Iron* in mass. (*Sulphate of Iron* was also tried in mass, with precisely the same result.)

One globule of *Ferrum aceticum* 3, gave the same elliptical motion, only *rather a stronger* movement to the pendulum.

One globule of *Platina* 3, moved the pendulum in the direction from B to A.

Plumbum 30, one globule, caused it to move backwards and forwards from D to C.

Calcarea carbonica 30, one globule, gave the reverse of the elliptical motion of *Iron*, and moved it from E to H, as the *Chalk* did above.

One globule of *Calc. carb.* 200, had exactly the same effect.

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Silicea 30, one globule, changed the motion to one from H to E. This experiment with the homœopathic infinitesimal quantity of *Silicea greatly gratified Mr. Rutter, as he had only that very morning experimented upon Flint for the first time.*

Phosphorus 30, one globule, immediately caused a total cessation of the motion of the instrument.

Iodium 30, one globule, produced the same effect as *Phosphorus*.

One globule of *Ammonia* 30, increased the normal action visibly.

Natrum muriaticum 30, one globule, reversed the normal action, and gave the reverse current just as the *Table Salt* did.

I then proceeded to place other homœopathic preparations upon the operator's hand, and the following were the results; only one globule of each medicine was used:—

Arsenicum, the instrument stopped.
Dulcamara, motion from B to A.
Opium, motion ceased.
Arnica, reverse of normal action, or reverse current produced.
Nux vom., stopped the motion.
Ignatia, reverse current.
Acid. hydrocyanic, stopped.
Belladonna, ditto.
Sulphur 30, reverse current.
Sulphur 800, exactly the same, both in direction and in force.
Pulsatilla 12, stopped.
Bryonia 30, reverse action.
Non-medicated Globules, no change upon the normal influence of the operator.
Ipecacuanha 3, reverse current.
China 6, ditto.
Rhus 30, ditto.
Stramonium 6, stopped.
Drosera 3, ditto.
Kali hydr. 30, ditto.
Spongia 3, ditto.
Ledum palustre 12, ditto.
Capsicum 3, ditto.
Cayenne pepper, same effect exactly.
Colocynthis, reverse current.
Digitalis, stopped.
Cannabis, reverse current.
Hyoscyamus, stopped.
Lycopodium, ditto.
Filix mas, ditto.
Euphrasia, reverse current.
Ruta 3, stopped.
Sabina 6, reverse current."

This was enough for one lecture, as our readers will readily believe. After following Dr. QUIN through his tranquil but triumphant demonstration of this proof of globulism, they will be prepared for, and excuse, the little outburst of enthusiasm to which he coyly relinquished himself at the close. He said:—

"I believe, gentlemen, I have now brought before you the leading points of the *truly beautiful experiments* of Mr. Rutter, and I feel confident that you will agree with me, that *science has made a gigantic stride by the philosophical instrument and important discovery of that gentleman*, and that homœopathic practitioners especially are greatly indebted to him for having *proved* the physical action of our remedies in infinitesimal quantities upon the human body; and that you will join with me heartily in doing honour to him for the great impetus he will be the means of giving to our cause. *The only reason for sorrow is, that our revered master, Hahnemann, is not alive to witness this triumphant proof of his own great discoveries.*"

A fluttering conversation took place between Messrs. CHAPMAN, VARDY, KIDD, REYNOLDS, (the moc-main truss gentleman,) and Mr. YELDHAM, and the meeting separated after the Earl of BELFAST, that great patron of science, had merely "corroborated" the inconsiderable statements of Dr. QUIN.

The curtain now falls upon the first act of Mr. RUTTER'S brilliant discovery, and its no less brilliant exposition by the indefatigable Dr. QUIN. The next act consists in a second, and what with something of an Irishism, is called an "Inaugural Lecture," on what is no longer the "New Magnetic Indicator," but the "Magnetoscope." We should here premise that human weaknesses beset globulists as well as other frail mortals.—MADDEN, of Brighton, first made the acquaintance of Mr. RUTTER and his instrument, and wished to convert them into his own personal homœopathic capital. The redoubtable QUIN, aided by the stolid Earl of BELFAST (a connection of Lord ALDBOROUGH, we believe,) snatched at the tempting morsel for his own use. Hereupon QUIN and MADDEN begin to quarrel, and indications appear that MADDEN will declare the demonstrations of the powers of globules by the "Magnetic Indicator" to be all gammon. However, we must not forestall the course of events. Our readers know the probable result when certain persons "fall out."

In his second lecture, Dr. QUIN gives an account of what took place when he, as one of a jury of twelve, paid a visit to that "man of genius," Mr. RUTTER. Of the experiments now about to be referred to, the sapient lecturer tells us:—

"They took place in the presence of twelve gentlemen, who accompanied me to Mr. Rutter's. Three of the twelve are non-professional, three are allopathic physicians, not believers in homœopathy, and the remaining six are homœopathic colleagues, medical officers of the two homœopathic hospitals."

The experiments of the last lecture were repeated, and, of course, with precisely similar results. The three "allopathic physicians" (we should be glad to know who they were) were more convinced than the globulists themselves.—One of the three is said to have written that "there was not a single failure." QUIN himself is still more confident than before. He declares stoutly:—

"*I have witnessed several hundred experiments upon Mr. Rutter's instrument, and I have never found it vary once; the same cause repeated invariably produces the same effect. Try the instrument as you will, it never errs; it has all* THE CERTAINTY OF A MATHEMATICAL EQUATION."

The writer in the homœopathic miscellany is equally sanguine. He tells us that the "interest" of the experiments which "prove" the physical influence of infinitesimal quantities continues "of the most intense kind;" but he takes a feather out of Dr. QUIN'S cap by declaring "that the full

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credit is due to Dr. MADDEN," and not to Dr. QUIN, of introducing the "Magnetoscope" to homœopathists.

"He (Dr. Madden) has had the start, was the first on the course, and has *brought to the task qualities and attainments which admirably fit him to conduct and systematize such experiments.*"

We must now introduce upon the stage Dr. MADDEN, the greater than Dr. QUIN, and the first in the field, though the celerity of the latter, when he did begin, soon stole a march upon the original SIMON PURE. Dr. MADDEN has also published a lecture, which appears in the same print with the QUINIAN assertions already placed before our readers; and we must premise, in the words of the lecturer, that "Dr. MADDEN exhibited all his experiments upon an instrument so contrived that the operator *could not* voluntarily influence the movements of the pendulum." Some of these experiments were quite as miraculous as those of QUIN. For instance, "Sulphur in substance, in the 30th dilution, and in the 7000th dilution, had equally the effect of reversing the current." An excellent weekly journal, the *Critic*, has made a calculation respecting such doses, and we find "it would take, at the rate of one of the largest of such doses per diem, a period of 2739 years for a patient to consume one grain of sulphur!" But alas for Dr. QUIN! the "first on the course" discovers that Dr. QUIN's experiments were full of fallacies and blunders. After Dr. MADDEN had exhibited many "most interesting and satisfactory experiments," exciting "great admiration" and "bursts of applause," some of them being with a globule of arsenic of the 40,000th dilution!

"*He called attention to the circumstance, that in Dr. Quin's lecture there were numerous and most important errors, probably occasioned by the hurry with which it had been composed. He showed that out of sixteen actions of medicines recorded by Dr. Quin, the actions of twelve differed from those produced by the same medicines on himself; and though the motions produced by several of the medicines differed, according as they were acting through Mr. Rutter or himself, he had since ascertained that the actions, as described by Dr. Quin, were in many instances not the same as those actually produced on Mr. Rutter. Dr. Madden said it was much too soon to lay down any rules as regards the actions of the different medicines on the pendulum, as a great many anomalies presented themselves which required explanation, and different individuals, in many cases, produced a very different influence on the actions of the medicines.*"

In the next week's lecture, QUIN comes out pretty strongly, insinuating that Dr. MADDEN is jealous of dividing the great fame of the application of the "Magnetoscope" to globulism.

"For me," he says, "to enter into a dispute with Dr. Madden about our respective merits in this matter, would be like raising a storm in a bucket on the sea-shore, near the Black Rock, in which were struggling two small minnows, who imagined themselves great members of the finny tribe in the neighbourhood of a Leviathan such as Mr. Rutter is, when compared with us, in the broad and deep ocean of science."

Beautiful self-abasement! What meekness is there not in QUIN?

The way in which Dr. QUIN escapes from the charge of wholesale inaccuracy, is a model of ingenuity. They are both "small struggling minnows;" but he has been a globulist from an old date—he carries relics of HAHNEMANN—has specimens of lachesis taken from the big sea-serpent—keeps globules sealed and locked from all parts of the earth—some of them are twenty-five years old, and, like wine, the better for the long keeping. Who is Dr. MADDEN but a globulist of yesterday? where did *he* get his medicines? How does *he* know his foreign globules are not damaged by travelling? Nay, has *he* not in his own body the *reliquiæ* of physic from the time long ago, when he took calomel and black strap in such abundance, —or when he inhaled the fumes of the physic he made up for his patients in Edinburgh,—in quantity sufficient to vitiate any experiments he may make with the "Magnetic Indicator?" Experiments must be made by hands washed in distilled water, belonging to persons who have never taken a dose of physic, and who have not even passed in propinquity to a chemist's shop for months at least. As for the globules, no one but Dr. QUIN can supply them; so he holds the whole matter in his own hands. But let QUIN himself convict and condemn the presumptuous MADDEN. In the last lecture, the experiments with Mr. RUTTER's instrument had "all the certainty of a mathematical equation." Now, unhappily, there are plenty of "idiosyncrasies, abnormalities, and irregularities;" but no—not unhappily, for Dr. QUIN's ingenuity converts these into evidence quite as "valuable" as mathematical certainties.

"*If* any person could produce equal results with the magnetoscope, Mr. Rutter most pertinently remarks that he would have less confidence in it, and when it is found that those who most anxiously wish to set the pendulum in motion have not the power of doing it, it is evident that the *will, the wish*, or the *anticipated result* is not an element in the experiments."

"It would have been wiser and more in consonance with professional courtesy, had Dr. Madden not been so eager to condemn. He has a great advantage in being so near Mr. Rutter, whose urbanity, courtesy, and simplicity make him beloved and respected by all who have the pleasure of his acquaintance. He would have learnt, in addition to all that he has already been taught by Mr. Rutter, and have profited by the knowledge, that from the earliest period of his (Mr. Rutter's) investigations, *idiosyncrasies, abnormalities*, and *irregularities* presented themselves, and were justly considered by him as *valuable* evidence; for, as he correctly remarks, *if* currents so feeble set in motion by causes apparently so trifling, pass through and influence the body, is it matter of surprise, *if* organism, disease, temperament, mental relations with the physical, etc., etc., should affect, control, subvert, or change the direction of these currents! *If* the breath from the lungs of a bystander be sufficient to reverse for the time the currents, is it wonderful that some are more, others less, susceptible to atmospheric or telluric electricity?"

"The experiments recorded by me were made with medicines, spontaneous and indigenous to the countries whence they were brought, prepared carefully

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by myself or by Mr. Headland, [he has given up snuff-taking,] or by other careful and conscientious chemists in the different countries I named in my last lecture; they all told the same tale when experimented upon. Mr. Rutter has a remarkably healthy, strong constitution, which has never been tampered with by medicine. When one sees such statements put forth by Dr. Madden, of differences between the action of medicines upon the healthy frame of the gentleman who instructed him how to experiment with the magnetoscope, and upon his own body, *one is naturally led to inquire from what source does Dr. Madden obtain his medicines, and if one can depend upon his body being sufficiently free from lingering medicinal effects originating before his conversion to homœopathy.*"

Dr. Quin does not stop to argue the matter further with his brother "minnow," but treats the imagination of his hearers to new wonders, before which the former astounding facts become quite insignificant. The miraculous effects of the "dead fly" and the "woman's single hair," are indeed in a state of attenuation when compared with the following:—

"I called your attention at our last meeting to the effect of *Flint* upon the pendulum; since then, some admirable experiments have been made by Mr. Rutter, beautifully illustrating the effects of crystalline forms. *Rock Crystal* (a pure form of *Flint*) gives four distinct motions to the pendulum. 1st. When the apex of the primary axis is placed in contact with the left hand, an oscillation takes place from F to G. 2nd. When the base of the *Crystal* (the part by which it had been attached to the rock) is placed in the hand, oscillation from H to E. 3rd. Upon the *Crystal* being laid across the hand, the apex from the operator, reverse rotation takes place; and 4th, when the apex is towards the operator, direct rotation takes place. Now, *the extraordinary thing is, that a globule of the thirtieth attenuation, or the decillionth of Silicea, displays all these four distinct motions as completely and satisfactorily as the mass of Rock Crystal does, by changing its position in the palm of the hand of the operator*; but it is of course impossible to predicate what will happen whilst dealing with so small a portion of the substance. *The motions can only be obtained by frequently moving the globule, and at every such change of position, one of the four directions is a constant result. When the experiment was tried last, it only required five changes to arrive at the four different motions. When the globule is dissolved in water, a drop of the solution gives oscillation to and from F G. Mr. Rutter attributes this to the polarizing effect of the Crystal.*"

Dr. Quin is still full of admiration for the great "Leviathan." The Behemoth of homœopathy is only second to "our revered Master" in his affections. The instrument is still "precious beyond all calculation," and we are reverently told of the relation between Mr. Rutter and the Deity. In his words—"We are living in the midst of mysteries which God is *revealing* to us for the good of his creatures." Another homœopathic scribbler pitches his note a little lower. It trusts "our readers have not been at all staggered" by the discrepancies between Madden and Quin, and doubts not they will, by some touch of Harlequinade, be transmuted into "confirmations strong, of the instrument and its virtue." But we are told now, to "wait and watch." Quin is again the first oar, and the *Trumpet* swears that his experiments are "fully reliable;" "we are not daunted" by such slight contradictions. "Wait and watch." It also gives a letter from Dr. Madden, of which the following is the ominous conclusion:—

"My great fear is, that hasty conclusions will lead to much disappointment and great confusion. The whole subject requires further elucidation before we can draw any just inference from the results: and my own experience is, that every day's experience tends to modify considerably the views one might be, at first sight, disposed to take."

Next week the notes had sunk still deeper. They were reduced to the pitiable condition of "ifs" and "mays." Our readers will be amused with the following close of an article upon the subject. The whole responsibility is sought to be thrown upon the "Leviathan."

"The excellent inventor of the Magnetoscope is confident, *it is believed*, in the exact accuracy of his experiments, and the unvarying character of his instrument. That his numerous and varied experiments have been made most cautiously and honestly, and that the results have been faithfully recorded is not doubted for an instant: but the question is, *if* the instrument acts independently of the will and of the muscular motion of its inventor, as suggested by Dr. Herbert Mayo in his third edition; and *if* the same results can be obtained, not by all, but by other experimenters: or would be obtained by himself, *if* he or the instrument were placed in certain conditions. All who look to his invention for proofs of homœopathy to be derived from physical science, are naturally anxious to have direct teaching from the master himself, and earnestly *hope* that his instrument *may* be found, on the repeated experience of other experimenters, to perform what has been predicated of it, independently of the *will*, or of the *muscular motion* of the operator. Under any circumstances, he has laid the scientific world, and all those who love their kind, under great obligations. Let us *hope* that he has indeed found the key to open this palace of delight—and *if not yet* found, still be it his—TO FIND IT!"

This week there it no lecture, "inaugural" or otherwise, from Frederick Foster Quin, nor any other communication from that knight-errant of globulism. The "currents" of his fancy no longer flow. In fact, the great, and from the first transparent, bubble has burst. One of the "minnows" has become a mite; the other, Madden, has turned Queen's evidence, and proffers himself as a witness at the bar of public opinion against his two accomplices, Rutter and Quin. The cue of the *Homœopathic Trumpet* is now to let them all down together as gently as possible. It is discovered that all the wonderful movements of the "New Magnetic Indicator" have depended upon the "will" of the operator. How this exercise of the "will" is to be distinguished from voluntary and responsible fraud, we leave our readers to determine. The *Trumpet* publishes three communications, all attributing the wonderful movements recorded by Quin and Rutter to depend upon some modification of "voluntary" motion on the part of the manipulator.

One correspondent declares, after having performed the experiments over and over again, that

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it is to some mysterious operation of the will, acting unconsciously to the operator, that the movements of the pendulum are attributable; in other words, that the pendulum obligingly follows the thoughts of the operator. He says:—

"I found that in whatever way my hand was connected with the instrument, I could invariably, *by my will alone*, almost instantly cause the pendulum to oscillate in any given direction. It is merely necessary for me *to think of any special direction*, or of a cessation of movement, and the pendulum immediately acts accordingly. The *effort* required to produce these results is *very slight*. In this way the pendulum can be *caused* to move backwards and forwards from the person of the operator; or from right to left, and back again; or in any direction between these two currents; or elliptically; or in a circle, either 'normal' or 'reverse;' or lastly, it can be brought to a dead stand. The movements may be rendered fainter or more marked *at pleasure*."

Another writer in the same quack repository attributes all the wonders to "involuntary" movements of the hand of the operator when placed upon the "New Magnetic Indicator. He tells us that,—

"Having been privileged to be a witness of the experiments performed by Dr. Madden at the Hahnemann Hospital, on the 21st instant, I have been rather surprised to observe that none of your correspondents have suggested what appeared to me to be their true explanation—viz., that all the movements of the pendulum were due to *involuntary* motions of the operator's hand."

The same writer describes an experiment in which different movements were produced when a letter written by a gentleman and another letter written by a lady were placed in Dr. Madden's hand. The motions did not at all answer to the influence of the different sexes, as impressed upon their handwriting, a feat formerly performed with the greatest ease. Some power moved the pendulum. The lady's writing did *not* act as it should do, the pendulum did *not* spin round in a direction the reverse to that caused by the writing of the gentleman. It should be mentioned that Dr. Madden did not known anything respecting the sex of the writers. Upon this the commentator remarks,—

"*My own opinion is that that power was the idea in his* (Madden's) *mind that the letter was a lady's, and that the reason why the lady's letter did not reverse the motion, was the idea that it was a gentleman's.*"

But the humblest pie of all is eaten by Dr. Madden, the Queen's evidence against Rutter and Quin. After his grand lecture at the Homœopathic Hospital, based, as he informed his hearers, upon experiments carefully and laboriously performed hourly and daily for the space of three months, he sinks in one short week to the following history of his extravagant self-delusion,—

"It is, I can assure you, no pleasant duty which I have now to perform—viz., to make known the fact that my recent experiments *have detected a most serious source of fallacy in all the previous ones, and go far to show that it will be of little or no real value to us in demonstrating the action of homœopathic remedies.* Some days before I delivered my lecture at the Hahnemann Hospital, I had discovered, to my great disappointment, that the instruments employed by myself and Mr. Rutter were not so fixed as they appeared to be, and that *every slight voluntary motion of the operator's arm was sufficient to produce any of the various movements.* I therefore begged of Mr. Rutter to devise some modification of the instrument, for the purpose of overcoming this source of fallacy, or, rather, as I then felt, of preventing sceptics from declaring that the motions were *manufactured*, in place of being induced by the passage of a current. Mr. Rutter, however, was and is so convinced that he is altogether *passive* during the experiments, that *he cannot see the necessity of any modification of the original machine.* I should mention here that it is a very difficult thing to devise an instrument which shall be absolutely rigid, and in the construction of which none of the laws of induction shall be infringed. Many apparently unexceptionable instruments have been devised which have failed, but the failure could always be accounted for by the infringement of some of the known laws of induction. I am so strongly impressed with the fact, that the mere possibility of producing these movements voluntarily, *reduced the whole series of experiments from the high standing of a demonstration down to the much less satisfactory one of individual testimony*, and I knew so well that unconscious muscular movements occur in us every day, that I resolved to sift this matter to the bottom. Now it was long ago pointed out to Mr. Rutter, and he has fully acknowledged the fact, that *unless you pay attention to the pendulum no definite movements take place.* The idea occurred to me that *possibly* this attention to the pendulum drew off my attention from my own body, and that I *might* accordingly make unconscious muscular movements capable of influencing the machine. I determined, therefore, to watch the pendulum and attend to my own sensations at the same time. *I found, to my dismay*, that when I resolutely determined not to move my body in the slightest degree, *no motion of the pendulum took place when I held the instrument in the usual way.* It is of great importance to note here that when I attended to my sensations I did not become conscious of any muscular movements, and it was only by a conscious voluntary determination to remain rigidly in one position that I checked the action of the pendulum. Thus far my investigations had proceeded on Monday, October 20th. I accordingly had an interview with Mr. Rutter, for the purpose of communicating to him my doubts and fears, and had determined, in the event of his sharing in them, to give up my intended lecture of the next day. Mr. Rutter, however, assured me that he could contrive an unexceptionable instrument, albeit he could not see the necessity of altering his present one: and in the hope that this would soon be done, and being still confident that I remained passive during all the regular experiments, I proceeded to London the next day, and delivered my lecture at the Hahnemann Hospital, *which step I have never ceased to regret*, for the following reasons:—As soon as possible after my return home, I commenced an elaborate series of test experiments, which have now been repeatedly performed in the presence of several friends—among others, before Dr. Sutherland, of Leamington, and Dr. Dudgeon, and which tend strongly to corroborate my fears respecting the trustworthiness of the experiments; for I find —1. That in the ordinary condition of the magnetoscope, *any motion which is anticipated inevitably takes place.* 2. *If I apply merely the point of any of my fingers to the brass ball, and wish for any motion to occur, it takes place immediately, without my being conscious of any muscular motion on my part.* 3. If a medicine is put into my hands without my having any possible

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clue to its nature, the motions no longer coincide with my former observations; so much so, indeed, that of *six medicines which have been tested in this way four times each, no one agreed more than twice, and two of them gave different motions every time they were tested.*

"An important point, however, still remained to be proved—viz., whether the movements were produced by unconscious muscular motions communicated to the instrument, or whether they were really due to currents set in motion by the exercise of the will. To ascertain this, I arranged a series of experiments, from which it appears, that whenever a machine is so constructed as to admit of the greatest effect being produced by the smallest amount of mechanical motion, (which is unfortunately the case with Mr. Rutter's instrument, it being, in fact, a combination of three levers, acted upon at the most advantageous point, to obtain the greatest effect from the smallest efforts,) such machine will act perfectly as a magnetoscope, even though all the known laws of induction are set at defiance in its construction: while, on the contrary, *every modification of the machine which increases its immobility, decreases in the same proportion its apparent sensibility to the so-called magnetic currents.*"

After this plain and significant recital, is it necessary to say one word of the credulous folly exhibited by the most notorious among the homœopaths? One would almost wonder how men could continue to walk about amongst their fellows under such a load of ridicule as that which they have brought upon themselves. Out of their own mouths they stand condemned, for it has only been necessary to put the different phases of this monstrous fable in comparison and juxtaposition. No better extinguisher than Dr. Madden could be desired for Dr. Quin and Mr. Rutter; and such has been the singular progress of the deception, that he is self-extinguished at the same time. Nothing but a determination to be deceived, or the utmost conceivable facility for self-deception, could have led persons having the stature and years of adult men, to pin doctrines which they profess to hold in reverence, to a silly and babyish toy. Nothing but this could have led them to forget the triple movement discovered all too late by Dr. Madden—to lose sight of the tendency of a weight attached to a silk cord to rotate, and of muscular unsteadiness and arterial action to impart motion to an instrument poised with the utmost delicacy. It never seems to have occurred to Dr. Quin and his disconfited compeers, that if substances of the 40,000th attenuation could produce any results upon any instrument, the air itself must supply constant and multitudinous movements sufficient to render all observation and record impossible.

But it was necessary to find some new point to raise the drooping spirits of the globulists under the many exposures to which they have latterly been subject in this country. The case was so desperate, that all which honourable men, even if deceived, should value, was readily staked upon Mr. Rutter's foolish device. It must always remain a question, morally speaking, whether the oscillations of the homœopathic pendulum have been most decidedly from R—— to F——, or from F—— to R——; but the movements between these two well-known initials have certainly been very considerable.

It is almost useless to speculate on the real nature and origin of Mr. Rutter's proceedings. It seems pretty certain that his instruments and experiments are plagiarisms from some nonsensical writings of that notorious hydropathic pervert, Herbert Mayo. Some will imagine Rutter to be self-duped, and that he did not know it was his own fingers caused the responsive shakings of his wonderful pendulum; but it requires a great stretch of credulity to believe that both he and Quin did not intentionally produce the rotations and vibrations of the indicator. There is a choice, it is true, between this and downright falsehood in relating the movements of the pendulum. We have also heard it suggested that Rutter must have intended the whole matter as a hoax, by which Quin, Madden, and their followers were gulled with the greatest ease. However, the incomprehensible extent of the folly or fraud shown in the whole affair renders it difficult to ascertain the springs and motives of the chief actors. Certain it is, that since the days of the Elliotson exposure, nothing like the present explosion has taken place; never has so signal a cheat been so utterly blown to the winds.

We really have been glad to get the most subtle and able of the homœopaths upon a stage where evidence could be sifted. They have, with almost inconceivable fatuity, themselves supplied this opportunity. And look at the result! The whole evidence, if such a term may be prostituted in favour of their vaunted system, is of the same calibre, worthy of the same trust, and having the same credibility, as that brought to bear on the "New Magnetic Indicator." Globulism is neither more nor less true than the wonders of this famous instrument. The same intellects dealing with similar evidence have supported both the one and the other, and they have shown, at last, to a demonstration, that they have reached the utmost confines of folly and dupedom.

As regards this monstrous chimera, taken by itself, we might smile with contempt and pity upon its participators; but when we consider that it invades the sacred provinces of life and health, we feel that, whether dupes or knaves, its propagators should be scourged with a whip of scorpions, and branded with eternal infamy, for such gross attempts to tamper with truth and science, and for such attacks upon the highest interests of mankind at large.

HOMŒOPATHY AND LEGITIMATE MEDICINE.

A special general meeting of the fellows of the Medical Society of London was held on the 10th instant, at which the following resolutions were carried unanimously, and amid much applause:—

"1. That in the opinion of this Society, the practice of homœopathy, or the prescribing medicines in what are called 'infinitesimal doses,' under a pretence that they are useful in the cure of disease, is founded in palpable error, is a delusion on the part of the prac-

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titioner, a deception on the public, and manifestly dangerous to its welfare.

"2. That the fellows of the Medical Society of London cannot honourably hold any professional communion with homœopathists.

"3. That, consequently, any fellow of this Society who shall hereafter practise homœopathy, or who shall knowingly meet in consultation any professed homœopathist, will thereby render himself unworthy of the fellowship of this Society."

THE WAR AGAINST QUACKERY.

It is gratifying to observe that the *Provincial Journal* has united its strength to our own in the work of extirpating the quacks from the ranks of the medical profession. Other journals will, no doubt, follow: such, at least, as would escape the imputation of being leagued with our opponents. The medical world will do us the justice to believe that our task is a philanthropic and a holy one; that we have no jealousies to gratify, and that we do not seek to satisfy any personal resentments. Our object is the pure and single one of preserving our fellow creatures from injury, and of purging the medical profession of a foul stain on its honour. No one having truth for his aim can hesitate for a moment to join us. The holding back in so righteous a cause must be reckoned conclusive evidence that the parties concerned have some objects dearer to them than truth; some corporate interests to promote; some feelings of clique or party to gratify; and all such persons must be taken to be in their secret souls opposed to the present movement. Let them take warning in time. They may rest assured that their professional brethren are more clear-sighted than they imagine, and can easily discern the hidden meaning of their silence.

Amidst, however, the present universal and fervid feeling of indignation, we perceive an attempt to lead the profession astray. It is sought to confine the irritation of men's minds to homœopathy alone. It would truly be a sad waste of time and thought to apply our powers so long and earnestly to crush such contemptible nonsense. The agitation so happily begun must not be so restricted. Every form of quackery must be included in professional reprobation. Neither the dignity nor the purity of the profession can be otherwise preserved.—Some forms of imposture may be more unreasonable and more pernicious to health than others; but all are equally insulting to the honour and equally opposed to the science of medicine. They only who cling to it as a trade would preserve their own cherished form of dishonesty by directing an undue amount of censure "against the sins they have no mind to."

If practitioners who were once respectable members of our profession, are determined to continue their support of knavish quackeries, we recommend them not again to write on such subjects; for they may rest assured that the pen is a dangerous implement when employed on such subjects. They will not easily persuade the public that it is honourable to meet roguish pretenders in friendly consultation, and then denounce them. Honourable men would not, and could not, act thus.—Such a dallying with knavery cannot be tolerated, and the delinquents, whoever they may be, must quit the ranks of our noble profession.

BRITISH AND FOREIGN REVIEW.—ITS SUPPORT OF QUACKERY.

It is only for objects of paramount importance, and under the pressure of an unavoidable duty, that we permit ourselves to make reference to the writings of our colleagues of the periodical press. But we cannot read the tissue of perversity and nonsense under the title of "Odyle, Mesmerism, Electro-Biology, &c." in the *British and Foreign Review* of this quarter, without exposing the fallacies it contains, and correcting the errors into which they might mislead the more unthinking of its readers. Reviewers find no worse employment of their time than in seeking to give plausibility to fraud, and to surround quackery with an atmosphere of affected knowledge. But the conceit of little learning, alone could have led to the perpetration of fifty-three pages on so silly a subject. We shall endeavour to dismiss it in a much more worthy and much more curt manner. It would be well, however, if reviewers would remember that they have not been elected to their places; that their office has been assumed; and if they would save themselves from the charge of presumption, they must discard all egotistical feelings, and evince the most uncompromising integrity. It is impossible for us to do more than guess at the motives which have led astray the writer of the article in question; but we doubt not every judicious reader will be struck with the extraordinary amount of conceit which runs through it.

In spite of all the glozings with which self-satisfied men seek to surround this subject, we do not mean to surrender the real battle ground. It is simply a question of common honesty. No displays of futile learning, and no clap-trap appeals to philosophy, or imputations of illiberality, will induce us to yield up the defences of science.—Admit once these mesmerists into the honourable ranks of our profession, and we should be as bad as they. "The occupant of an important chair in a renowned university," has *no* "claim upon the critical notice of the profession which is justly denied to men of minor position and pretensions. *We* do not mean to congratulate Messrs. Braid, Bennett, and Wood on their efforts to place mesmerism and mesmeric doings in their true position." This braggart philosophy ought, on the contrary, to receive a severe check, and the men who court attention and popularity by stepping from the ranks, must be reduced to their places by resolute command. If they deserve further notice than other men, it is that of severer censure.—They are the guardians of science, and if they betray the post committed to their keeping, no other reward than the retribution of traitors is fit for them.

The strange and devious symptoms of hysteria

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and catalepsy have been long known to and noted by physicians. The effects on the nervous system of monotony of sound and uniformity of motion are familiar even to nurses. The child hushed by a lullaby, and rocked in the cradle, gives an example of the philosophy of these men. The pretended facts which have been added to our store of knowledge by mesmerists we unhesitatingly pronounce to be fables. That this is so, let our readers judge by the extracts we are about to lay before them from the article in the *British and Foreign Medico-Chirurgical Review*. They will hardly credit that weakness and culpable indulgence could be carried such a length.

The reviewer imagines he has made a great discovery in his classification of what he calls mesmeric phenomena into subjective and objective, which, as far as his clouded intellect permits him to be understood, mean phenomena developing themselves in the body of the operator or the subject, and phenomena arising in the body of the sufferer or the object. With this weak and puzzled distinction he professes to make palpable some errors into which he admits the mesmerists have fallen, and to reconcile their jargon with philosophy. This conceit forms the whole staple of his long and weary article. In following it out he involves himself in many gross and absurd contradictions, but he yields up every point which the most bigoted mesmerist would seek to attain. In illustration of these observations we lay the following quotation before our readers:

"We know of no reason why magnets should not appear luminous in the dark, except that we and the greater number of men and women cannot see their luminosity; but this may be from a defect in us. Still, on the other hand, the 'sensitives' who *do* see it, *may* see it *subjectively* from a defect in them."

The italics are the author's, not ours. We would suggest to him that there is another little reason on which the medical profession will retain its hold. It is that mesmerists do not speak the truth: this *may* explain the difficulty put by the reviewer! But what can be looked for from an author who is "willing to take the statements in Baron Von Reichenbach's work as statements of facts, and allow them, in respect of their *truthfulness*, the same degree of weight that he would allow to any statements whatever."

The italics again are not ours.

Let our readers attend to the following quotations, and then say whether the reviewer who has given them without strong reprehension, does his duty to science.

"When Mdlle. Reichel was out in a clear night, she always pointed out the Milky Way as decidedly cool, as also the Pleiades, the Great Bear and others; and in general the starry expanse was felt cool, and only individual stars caused a sensation of warmth. These were invariably stars of the first magnitude—in short, always planets."

"When I raised my hands to Mdlle. Reichel, she felt, even at a distance, my left hand diffusing warmth, my right coolness, on her, like a distant magnet."

"One point of remarkable power is the mouth, with the tongue; it is very cool, and therefore negative.—The sensitive feel everything most distinctly with the lips, especially the odylic influence."

"Here we obtain a not altogether uninteresting explanation of the nature of a kiss. The lips are one of the foci of odyle, and the flames which our poets describe as belonging to them do in fact play there."

But the climax is to come. "Baron V. Reichenbach, a man of fifty-six, wrapt in repose, in bed, with a young nun's hand placed every hour on the pit of his stomach, measuring the intensity of its odylic warmth," is a disgusting picture of imbecility which Germany alone could venture to place before the world as a sample of philosophy.

We are told also that one of the Baron's subjects named "F. Weidlich, had been in the English navy, and had acquired *no very good name* among the Viennese physicians." To this objection the Baron answers, "I do not inquire into such matters." Yet this reviewer has nothing to say "which is not very creditable to the Baron's scientific truthfulness." For our part, we doubt whether he would be believed on his oath at the Old Bailey.

Did we generally observe, on the part of the writers in this Review, forwardness in the cause of science, and anxiety to hail discovery, we should be less inclined to mark their faults; but when we contrast their desire to bolster up things which all sound physiologists and physicians feel only as matter of disgrace, with the ill-concealed evidence of habitual silence on things which have received the assent of the scientific world,—frequently, too, of niggardly praise of some individuals, and often of extravagant encomium of others within favoured circles,—we feel little disposition to be lenient; and the less that it is not the first time they have signalized themselves in the defence of quackery.

THE LONDON EPIDEMIOLOGICAL SOCIETY.

It will be recollected that when the Epidemiological Society was first set on foot, it had the warm support of The Lancet, and may even be said to have originated in the pages of this journal. Our present object, however, is not to claim the merit of helping into being a Society, of which the existence is at present barely known, and only known for its anomalous constitution, its blunders and mishaps, its want of tact in the selection of one or two of its office-bearers, and the neglect—we had almost said the scorn—of some who ought to have been its earliest and most zealous supporters. We have also been disgusted at the tricks which have been allowed to be played at the expense of its reputation, and, we fear, to the injury of its funds. We have watched its internal operations, however, with a vigilant eye, and it gives us much pleasure to be able to say that they will bear inspection, and that our object at present is to do justice to those who share the odium without partaking of the blame. Never was a Society more free from systematic jobbery and corruption. Honesty and zeal, industry and perseverance, have characterized its working men, who have been too earnestly engaged in the pursuits of science to concern themselves about the

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buzzing of one or two drones who once hoped to fatten upon the stores of the hive, and to make the Society a mere advertisement of their unhonoured names. This, we believe, will not be again attempted; nor is it our wish to censure with severity the errors of a Society, which really deserves much more encouragement, both from the profession and the public, than it has yet received.

Medical men live by disease, and chiefly by epidemic diseases; and that a body mainly consisting of medical men should have formed itself into a society for the express purpose of investigating and preventing epidemics, and yet have met with no adequate support from the public, is a state of things which can only be accounted for by assuming that the public has no means of appreciating its exertions. And, in fact, this is the real state of the case. The Society meets but once a month; the papers which are read at these meetings are not published, nor are the discussions generally reported. Moreover, the meetings have been thinly attended, although the papers have certainly merited, generally speaking, a much higher compliment. But the truth is, these papers and the discussions upon them form so trifling a part of the laborious researches of the Society, that, in our opinion, it was a mistake to establish these monthly meetings at all. There are already too many medical societies meeting periodically in London; and if the anomalous constitution of the Epidemiological Society were really essential to its existence, (which we much doubt,) this feature should have been well considered before these meetings were determined upon; meetings at which professional and non-professional members are allowed the common privilege of discussing medical subjects, and concerning which certain lay members or visitors appear to consider themselves better informed than the professional members! In fact, the Society is neither a medical nor non-medical society, and yet both; neither a club nor a charity, and yet partaking of the character of both. It is a mongrel affair, and yet it is not unlikely to become one of the most important societies in Europe. At present it consists nucleus, which, with proper management, will gather around it some of the first men in every country and nation; for the object of the Society is to set the whole scientific world at work simultaneously and harmoniously, to check the torrent of disease which annually carries off no inconsiderable fraction of the human race. This is no light undertaking, and cannot be accomplished in a day or a year. The Society has indeed scarcely existed a year, and thoughtless people are already asking, "What has the Epidemiological Society done?" In a few months these unreasonable persons may have an opportunity of guessing what the Society *would* have done in one short year, had it been adequately supplied with funds. Already several special committees have been set at work; and among other subjects of inquiry, the vexed but momentous question of vaccination has received no small share of attention. We hear that a large number of replies to the printed questions have been received, and that they are full of interest—but that the Society cannot yet afford to publish them! We hope this cannot be true; for this is only one branch of inquiry among several already in operation; and we understand there are other important undertakings contemplated, which cannot be even arranged for want of funds for such expenses as printing and postage, the distinguished men who are at work night and day in this benevolent employment not only receiving nothing for their labours, but being themselves the principal subscribers to the funds of the Society. We cannot think well enough of human nature to suppose that this state of things can last long; nor ill enough of the public to believe that they will allow it. A few energetic spirits may hold on for some time longer, but the work to be done cannot be accomplished by a few; and we see plainly that the Society must soon come to an end, or so restrict its labours as to become almost useless, if the pride of its managers any longer prevents them applying boldly to the public, and, if necessary, to the government, for sufficient help. We must indeed repeat that a Society which has obtained the patronage of such men as Lord Shaftesbury, will not lack the support of the public if it will only condescend to ask for it. We shall return to this subject again. Meanwhile, let us entreat our medical readers who have not replied to the queries on small-pox and vaccination, to forward their reports as soon as possible. Dr. Seaton is the Secretary of the "small-pox and vaccination committee," every member of which has been selected, we believe, not for ornament, but use. In the present state of medical opinion on that most vital question, the protective power of vaccination, we shall look with great interest for the report. We are absolutely sick of the dogmatism with which this subject has been stultified by one or two whose experience might at least have taught them caution. The Epidemiological Society is pledged to no opinion. They ask the profession for facts, and offer a statistical return. We do not see how any theory or any individual authority can for an instant stand against the results of such an inquiry.

VOLUNTARY EXAMINATIONS AT APOTHECARIES' HALL.

The fact that ninety-three young gentlemen, all of whom have given legal proof of having entered upon the career of medical study, presented themselves at Apothecaries' Hall on Saturday last, to be examined as to their attainments in classics and mathematics, is an event of too much importance to be passed over in silence. The fact is at once creditable to the candidates, and to their instructors and advisers, and it is full of gratification for the present, and of hope for the future. Twenty years since it would have been scarcely credited that nearly a hundred medical students, who at that time were generally, although perhaps erroneously, considered as among the idlest and most turbulent classes of the rising

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generation, would voluntarily present themselves to undergo a written and oral ordeal in the elegances of Latin and Greek poetry, oratory, and history, and in the accurate and logical deductions of algebra and geometry. But such an event has actually taken place, and a legion of young gentlemen, instigated by no other motive than a laudable ambition, have sought this honourable distinction. That the attainments and aspirations of the candidates have exceeded the anticipations of the examiners, is evinced by the fact which has been communicated to us, that although the candidates were required only to prepare themselves in the Greek text of the Gospel of St. Luke, upwards of forty preferred the Anabasis of Xenophon, a work the comprehension of which, we hardly need say, requires far more knowledge of the Greek language than is necessary for the New Testament.

We have remarked that this circumstance is pregnant with hope for the future. We have formerly seen the study of the classics and mathematics confined to the halls of Colleges and Universities, and we have seen in our own days that an acquaintance with these subjects has not unjustly been deemed to confer a higher degree of professional dignity than is attained by the pursuit of the general routine of medical study. Thus we have remarked that the knowledge of Greek and Latin has constituted almost the only distinction between the physicians and the general practitioners; and more lately, the London College of Surgeons has endeavoured to draw a line of distinction between its Fellows and Members, founded partly upon the same grounds. But in the late movement at Apothecaries' Hall, we find the principles of abstract science, the charms of poetry, the graces of oratory, the dignity of history, the subtleties of logic, the properties of numbers, the conclusions of geometry, all brought to bear upon the active duties of professional life. The great proportion of those who have passed this examination are destined, not exclusively for the court and the palace, not for the chief places in the metropolitan hospitals, not for the drawing-rooms of the luxurious and the wealthy; but for the country town and the village, for the house of the farmer, for the miserable hovel of the pauper, for the cockpit of the man-of-war, and for the camp upon the battle-field. But the principles of science, and the beauties of literature, as they adorn the loftiest station, will tend to elevate the humblest; and whatever be the sphere which the student of to-day may be hereafter called upon to occupy, he may exclaim with the Trojan hero,—

"Hæc olim meminisse juvabit."

We have penned the above remarks without any wish to eulogize the Court of Examiners of the Society of Apothecaries, with whom this movement in favour of education has originated; but it is simply an act of justice to admit the great importance of the step they have taken, and its material influence upon the future destinies of the profession. They have sown the good seed in evil days; it is perhaps reserved for other men, and for another generation, to reap the fruits of their exertions.

BRANDING OF DESERTERS.

The army surgeons have won another victory over the anti-medical feeling so constantly appearing amongst the authorities at the Horse-guards. From the following letter, of the truth of which we have received corroborative proof, it will be seen that the attempt to degrade medical officers by making them perform the duties of the executioner, has been defeated:—

To the Editor of the Times.

Sir—I am sure the medical profession at large will be glad to learn that the order enjoining medical officers in the army to mark deserters with the letter D, has been deferred until further orders. This I have little doubt, is equivalent to its total abrogation.

I am, Sir, your obedient servant,

Chirurgus.

It is well the matter should end thus, though nothing would have told more against the spirit of those in authority than the spectacle of army surgeons actually engaged in the process of branding and marking their brother soldiers.

Reviews and Notices of Books.

The Prevention and Cure of many Chronic Diseases by Movements: an Exposition of the Principles and Practice in these Movements, for the Correction of the Tendencies to Disease in Infancy, Childhood, and Youth, and for the Cure of many Morbid Affections of Adults. By M. Roth, M.D. London: John Churchill, Princes-street, Soho. 1851.

In these days of fashion in physic we do not wonder at systems, however novel, being put forth to supply the place of legitimate medicine. The public, as well as the profession, have a taste for new things as agents in the removal and cure of their ailments, and therefore it cannot be matter of surprise if from time to time startling facts and new discoveries are promulgated. The work before us proposes to cure the entirety of diseases classified in nosological nomenclatures—not by means of the ordinary remedies, but through the beneficial influence of movements and mechanical appliances. We are ready to concede that many physicians in modern times have not given sufficient attention to regimal rules and many adjuvants, which might very profitably be brought to bear as secondary to more potent means. Some have erred in trusting too much to physic; and in many instances, especially in certain chronic and functional maladies, physic alone will not achieve the results desired.

We do not wish to class the work *sub judice* with the treatises advocating any of the pathy sciences, because it does not, like them, prefer the establishment of incomprehensible nonsense. We can understand how a judicious and periodical movement of contracted limbs will, by gradual extension of muscles and tendons, be followed by

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decided benefit. Muscular exercise, flection, and friction, will incontestably in many cases be of eminent service, and empirics, both ancient and modern, have proved this to be true. But it is not easy of comprehension how mechanical applications or muscular movements can be of any service in a number of diseases which the author enumerates. It is, on the other hand, very comprehensible that they might do serious mischief. It is true, as our author cites, that Hippocrates, Galen, Cornelius Celsus, and divers other names belonging to hoar antiquity, might recommend these exercises in their writings; yet we are not to receive implicitly all they have said, nor subscribe to all they have recommended; for it must be remembered that ancient books were by no means free from absurdities. It is the misfortune of mankind to be hobby-horsical—they were so in former times as now; and really, an infatuation to think but one way, to make facts and circumstances bend that way, pervades the followers of physic more than most men. If exercise and muscular movement are advantageous in some few conditions of the body, it is not to be supposed they will be under all conditions. With the first and second chapters of Dr. Roth's book we do not quarrel: a good deal of it is far-fetched, but many of the positions the writer assumes come within the pale of truthfulness and possibility. Of much, in the practical part, we are very sceptical, and a great deal we do not believe. To talk of hernia, diseases of the spleen, kidneys, gall-bladder—of ilius, aneurisms, cerebral fever, and a number of other serious affections, being treated on the principles set forth by this book, is calculated to do harm.

On diseases of the heart, the author thus delivers himself:—

"These diseases must be treated with the greatest caution, and the circulation of the blood must be rendered more regular, either by conducting it or deriving it from the heart. The first is done by manipulations towards the heart, along the more or less accessible blood-vessels, and by hard ligatures on the arms and legs; the second, by the similar distribution of the blood to the capillary vessels of the skin, so that their activity becomes increased."

If the author were much acquainted with the radical pathology of many cardiac affections—if he had had much experience in the intractable diseases of the heart, *manipulations* and *ligatures to the legs* would scarcely have found a consideration in his pages. In certain of the organic changes, the excitement produced by external frictions and the irritation of ligatures would unquestionably do much harm. A great portion of the latter part of the work is nonsensical, and in no manner based upon the rules of science or the deductions of reasoning. To say that passive movements of the arms will relieve hypertrophy of the heart, is a very unpathological piece of argument, and very absurd; so much so, that we do not think it worth while here to enter into the slightest argument on the question. The most rational section in the work is that on Dress; yet we cannot go so far as to say that "hats produce atrophy of the cranial bones, and cravats diseases of the eyes." Dr. Roth insists, and very properly, on the ill-consequences of tight stays; and when the matter is seriously considered—how the female sex often lays the foundations of grave visceral disease, distortions of the osseous system, and remote complaints,—even the reform of Bloomerism is more to be desired than the silly wasp-waisted fashion of the modern belle. We believe that an immense amount of human suffering, and even great saving of human life, would be consequent upon the total discarding of stays.

In conclusion of this brief notice of Dr. Roth's work, we must say there is a great portion of it that merely swells the volume, and would have been better omitted. All could have been said, if well said, on the subject, in an essay of fifty pages. The illustrative engravings are admirably executed, and the book is well got up.

Translation of the Pharmacopœia of the Royal College of Physicians of London. 1851. With Notes and Illustrations. By RICHARD PHILLIPS, F.R.S.L. & E., F.G.S., late President of the Chemical Society, Curator of the Museum of Practical Geology, &c. 8vo, pp. 567. London: Highley and Son.

We always open a posthumous work with a feeling akin to pain. If our duty to the profession sternly impose on us the application of condemning the mischievous tendencies, erroneous doctrines, or careless compilation of such a book, there is no part of our occupation we so instinctively shrink from, or would more gladly avoid; if, on the other hand, this most disagreeable duty be spared us, and we are enabled to speak in laudatory terms of, and warmly to recommend, as in the present case, the publication to our professional brethren and medical students, still the painful reflection continually haunts us, that the brain which execogitated, and the hand which executed it, the amassed and valuable experience, disciplined and careful habits of thought, sagacity and wit sharpened and polished by constant use, the treasured acquisitions of a life of mental exertion, with all the tact and delicacy of manipulation that practice alone can impart to the surgeon or experimental philosopher—should be lost to, and have ceased from among us; whilst he who possessed these qualifications no longer survives to feel that justifiable satisfaction which every man must derive from the approval of his equals, and which is but too frequently the sole reward of him who devotes his life and energies to scientific research.

Such approval would now be tendered in vain to him whose last work is before us, and who of all our British chemists was the most fitted by early education, subsequent position, and intimate knowledge of the subject, for the task of illustrating and explaining our national Pharmacopœia.

Brought up at Plough Court, then at any rate the best school of practical pharmacy in London, under the late William Allen, Mr. Phillips settled in the Poultry for some years as a chemist and druggist, but which business he eventually quitted,

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and devoted himself to the pursuit of chemistry as a science. At various times he filled the office of lecturer on chemistry at the government school at Sandhurst, the Webb-street School, St. Thomas's Hospital, and, we believe, at some other of our medical schools, occupying also the Materia Medica chair at one or the other of these institutions, if our memory serves us aright; and finally was appointed curator of the Museum of Practical Geology now in Jermyn-street, when that establishment was founded by government, and which office he filled at his death; this event taking place, as we noticed at the time in our obituary, on the 11th of May, the day previous to the public opening of that institution by H.R.H. Prince Albert.

A detailed and experimental review of the "Pharmacopœia Londinensis of 1809," which first appeared in the *London Medical Review*, and which he afterwards reprinted, with additional experiments and remarks, in a separate form, during the year 1811, established Mr. Phillips' claims to be regarded as an authority on pharmaceutical chemistry. This *brochure* exercised a most beneficial influence on the pharmacopœias which have since been issued by the College of Physicians.—Of those of 1824 and 1836 he published translations, with notes and illustrations, which have long been regarded as standard authorities on this subject. Of the translation of the Pharmacopœia of the present year now before us, the editor remarks:—

"A portion of this work, on the completion of which the author had been engaged within a few days only of his decease, had been already consigned to the press, when his widow and executrix placed in my hands the copious manuscript and explanatory notes of my late highly-valued friend and former teacher, in order that I might superintend its passage through the press."

This work is upon a more extended scale than the translations of previous Pharmacopœias, the design of the author having been to make "the present work a compendium of whatever is yet known respecting the more important chemical properties of every substance and preparation inserted in the Pharmacopœia"—an improvement on its predecessors, as supplying an omission which formerly obliged the student to have recourse to other works on pharmacy for an account of many of the drugs and preparations contained in the Pharmacopœia.

Part the First is a simple translation of the original, excepting some remarks on the tests ordered by the College for ascertaining the purity of the drugs inserted in the Materia Medica.

This portion of the book is concisely executed and with evident care, as we gather from a little note, under Acidum Arsenicum, explanatory of a somewhat ambiguous expression employed by the College, respecting the alliaceous odour developed by arsenical vapours.

In the more important division of the work, "Part II, Preparations and Compounds," occupying 474 pages, the formulæ of many of the preparations contained in the last Pharmacopœia, the products of which are now judiciously inserted in the Materia Medica, have been restored; and although we have our doubts as to the advisability of this restoration and consequent addition to the bulk of the book with a questionable result as to its utility, we are willing to admit that there is some force in the Editor's observation, that these restorations may be "useful to those practitioners who may be desirous of preparing their own chemicals, and also in frequently affording excellent practice to the student in operative chemistry and pharmacy, in the use and management of chemicals and of apparatus;" and as these restored formulæ are all printed in italics to distinguish them from those of the preparations of the present Pharmacopœia, which occur in ordinary type, no confusion can arise in the reader's mind by the absence of these in the original. This plan has sometimes been departed from, and "former Pharmacopœia processes have not always been restored; for if obviously better methods, as in Liquor Ammoniæ, p. 103, have come under my notice, these have been preferred, and are printed in similar type to that of the rest of the notes and remarks;" among which we also notice Strychnia, Sodæ Bicarbonas, Veratria, &c.

We have already remarked that the distinctive feature of the present translation, and which really makes it a new book, is the abstract of whatever is most important concerning each substance occurring in the Materia Medica: of these we may notice the remarks on Essential Oils, occurring under section Aquæ; on the Cinchona Barks and their alkaloids; on Aloes, Opium, Valerian, and Sugar, as accurate and useful.

In other respects, the plan and arrangement of previous translations seem to have been adhered to; thus we have the dates of the Pharmacopœia and former names of each preparation, the source of the raw material employed, remarks on the properties of the base, the decompositions which occur in the process illustrated by diagrams showing the decomposition and resulting products in equivalents, observations on the Pharmacopœia preparation, with its atomic and per-centage composition, its crystalline form, if it be a salt, its symbol, or, as the editor prefers to call it, "formula," and sometimes the theoretical views now entertained by chemists respecting the base or the preparation. In addition to the above, we have an account of the usual adulterations or impurities, and modes of detecting them, the incompatible substances, the preparations of the Pharmacopœia, in which the salt or product is employed, and lastly, its medicinal uses and doses.

We would refer the reader to the observations under Acidum Phosphoricum, Acidum Nitricum, Decoctum Cinchonæ Rubræ, Extractum Opii, Hydrargyri Chloridi, and Liquor Ammoniæ, which last we should have wished to have quoted, but our space restrains us.

The new preparations, such as Chloroformum, Ext. Nucis Vomicæ, Syr. Ferri Iodidi, and the

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tests in the Appendix, are treated of at length, an account of the principal ingredient or active principle of each being inserted either under the first or the most important of its preparations.—The articles of the Materia Medica not employed in Part II., are clumped together as an Appendix to "Prepared Vegetable Substances," which, considering this Appendix contains no less than six which are animal products, is rather an odd arrangement. We find, amongst these, this remark on the *Gaduin* of Dr. Jough, said, by him, to exist in cod-liver oil :—

"It is most likely that this gaduin is merely an impurity arising from partial decomposition of the oil, and has no claim to be looked upon as an essential constituent of it."

A catalogue of the omissions and insertions in the present Pharmacopœia, an explanation of the method of employing symbols and formulæ, tables of formulæ and equivalents, the usual nosological table, and an useful index, complete the work; which, when we look at its convenient size for a book of reference, and the excellence of the paper and type, is by far the cheapest publication on the subject, as it is unquestionably the best.

We also observe a few corrections of some of the formulæ of the original, which the editor appears to have been authorized by the compilers of the Pharmacopœia to make. Of these, the most important is the diminution, by one-half, of the quantity of the spirit and of water ordered to be used in Tinct. Ferri Ammonio-chloridi.

Much attention has been paid to the adulteration of drugs and chemicals, and the methods for detecting these sophistications.

Lectures on the Principles and Practice of Surgery. By Bransby B. Cooper, F.R.S., Senior Surgeon to Guy's Hospital. 8vo, pp. 964.

For twenty-five years Mr. Bransby Cooper has been surgeon to Guy's Hospital; and the volume before us may be said to consist of an account of the results of his surgical experience during that long period. It is less a systematic work on surgery than a series of essays, in the form of lectures, on the practice of the author himself, both in the wards of the justly celebrated institution to which he has been so long attached, and amongst his private patients.

The manner in which the various diseases are treated of, and their copious illustration by cases, remind us somewhat of the lectures of the late Sir Astley Cooper; and the style, which is forcible and clear, is well adapted to a work on the practice of surgery.

It would be difficult to select any passage for quotation, and we can only direct attention particularly to the lectures on the surgery of the regions, in which the author has adopted the useful plan of giving an anatomical description of the parts to be operated upon, the cautions to be observed by the operator, and the mode of operating. Whilst on this subject, however, we cannot agree with Mr. Cooper in the following observation :—

"It was at first my intention to call in the assistance of wood-cuts; but upon consideration, and a careful inspection of the best illustrated works, I abandoned the idea, from the feeling that such illustrations are generally very inadequate to their object, and that they too often mislead instead of informing the student."

Well-executed engravings from faithful drawings could not but be useful in a work like the present.

We cordially recommend Mr. Bransby Cooper's Lectures as a most valuable addition to our surgical literature, and one which cannot fail to be of service both to students and to those who are actively engaged in the practice of their profession.

The Journal of Psychological Medicine and Mental Pathology. No. XVI. October, 1851. Edited by Forbes Winslow, M.D.

Dr. Forbes Winslow had no ordinary obstacles to overcome in establishing the *Journal of Pyschological Medicine*. He has bravely fought the battle, and, we trust, is now reaping the reward to which he is so justly entitled? His journal will elevate and ennoble the higher departments of medical philosophy. He deals with man in his spiritual relations with his fellow-beings, and takes under his special consideration the human mind in health and disease. Not satisfied with discussing the more practical parts of the science of medical psychology—viz. the medical, moral, and judicial treatment of the insane, and the management of lunatic asylums, the editor aims at more exalted flights, and grapples, with the pen of a master mind, with all those great moral and social questions which are so closely interwoven with the happiness, intellectual progress, and elevation of the human race. But above all, it is destined to extend our knowledge of the true pathology of the brain, and to give us great and comprehensive notions of the treatment of insanity. It was said by a distinguished philosopher that he who made *two* blades of corn to grow where only *one* grew before, was a benefactor of his species. If the unhappy portion of our fellow-creatures, whose amelioration Dr. Winslow has so much at heart, could give expression to their feelings of gratitude for his able exertions to promote humane and enlightened views of their condition, we can easily conceive in what terms they would convey to him their sentiments of respect and affection. The contents of the present number of the journal are varied and interesting. Opening with a philosophical article on "Sleep, Dreaming, and Insanity," the Editor gives his readers an able metaphysical paper on the "Theory of Reasoning;" this is followed by an elaborate and statistical account of the "State of Lunacy and Lunatic Asylums in Ireland," based upon recent Parliamentary documents; succeeding this paper, we have a carefully written account of "the Present Condition of the Insane in British Asylums," compiled from a large body of annual reports. The journal also contains essays on "Crime," "Medical Evidence in Cases of Insanity," "Criminal Luna-

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ties," "Chancery Lunatics," "Suicide," and other communications relating to the speciality of the journal. We consider this among the *best* numbers of the journal that have been published.

Suggestions for the Extension and Perfection of Vaccination, simultaneously with the Systematic Study of Epidemic and Endemic Disease in India. By J. R. Bedford, Esq., Assistant Surgeon, Bengal. Calcutta: De Rozario & Co.

Although the giving effect to a measure of the nature contemplated by Mr. Bedford must rest entirely with the Indian government, we feel bound to notice, in terms of the highest honour, a proposal so great and so useful as that suggested by its able author. We do this as matter of duty, and under the hope that our approving words may meet the eyes of some who are interested in the welfare, and who have the power to minister to the wants of British India. Meanwhile let Mr. Bedford go on in the same line of usefulness, and we venture to anticipate that, inert as may be his official superiors in India, his own energy will meet with its reward in the long run.

"Almost every point of inquiry here treated of," says Mr. Bedford, "was contained in a requisition made to medical officers in the year 1839, by the Medical Board, to furnish reports on the topography and statistics of their respective stations. The comprehensive mind of Mr. J. Ranald Martin, too, appreciated, and his pen urged on the acquisition of such knowledge, in his very able 'Report on the Medical Topography and Climate of Calcutta.'"

There is a serious error in the above passage. It was Mr. J. R. Martin, and not the "Medical Board," who originated the "requisition," and the whole measure of sanitary regulation for the East Indies, and he did this, not in 1839, but in 1835. Mr. Bedford would make Mr. Martin follow, where he really and nobly took the lead.

Manual of Human Physiology for Students; being a Condensation of the Subject, a Conservation of the Matter, and a Record of Facts and Principles up to the present day. To each subject are appended, in Notes, Summaries, in Rhyme, of the Composition of the Fluids and Solids &c. By John Morford Cottle, Licentiate of the Royal College of Physicians, &c. Post 8vo, pp. 304. London: Highley and Son.

Such is the full title of Dr. Cottle's curious book. With the matter there is little to complain of; but the manner in which the author attempts to instruct the students is peculiar in as far as physiology is concerned, though for the dissemination of knowledge in infant schools a system like that propounded in the work before us, has, we believe, been long in practice. The following extract will be sufficient to show in what Dr. Cottle's peculiar style consists:—

"*Urine.*

The mean amount of fluid, by the way,
Is five-and-thirty ounces in the day.
Its separated solid matters hold
Urea forty-five per cent., we're told.
Touching urea, this on memory fix—
That azote's rate per cent. is forty-six.
This substance daily from the system drains
About four hundred three and thirty grains.
To gain its formula, you've nought to do
But give to symbols C H O the number two,
With four to N, which does express the state
Of an ammonia, a cyanate.

Chronic Cachectic Nephritis, or 'Bright's Kidney;' introduced to illustrate the changes that occur in the Urine.

Dropsy nephritic may be complicate
With cirrhosis, bronchitis, or struma innate.
One thousand and twenty is urine; but when
This disease is set in, 'tis a thousand and ten.

1st stage.

In the first stage the only change worthy of note
In the urine, is fat epithelium to float;
And mark in this stage what corpuscles are said
To be wanting in blood, which are only the red.
The kidney enlarged from four ounces to eight,
Red spots the position of tufts indicate.

2nd Stage.

Next the urine albumine and hæmatine gains,
While the blood the urea and lithates retains.
The cortical substance, more swelled, now projects
In medullary portion, and tubes intersects;
Obliterates some of the tufts and the tubes,
While from others a fatty albumine exudes.
'Twixt anæmia, mingled with partial congestion,
A tubercular gland does soon settle the question.

Symptoms more or less from commencement.

The skin becomes arid, and pasty, and white;
Pale urine is voided full twice in the night;
Dyspeptic and retches, gets thinner apace,
And the dropsy does often commence in the face."

Observations on the Diseases of the Rectum. By T. B. Curling, F.R.S., Surgeon to, and Lecturer on Surgery at the London Hospital, &c. London: Samuel Highley. 1851.

This work appears to be a concise account of the changes that take place in the structure of the rectum, and of the symptoms and treatment of its diseases. The work is especially addressed to the younger members of the profession. The author does not offer a complete treatise upon the subject, but rather proposes a system of pathology, which (he thinks) "may lead to judicious and successful treatment."

The speculum ani Mr. Curling recommends is described by him as follows:—

"A plated speculum of a conical form, so as readily to penetrate the sphincter, with the side opening of sufficient width, and carried to the blind extremity of the instrument: and instead, also, of a movable piece, I have substituted an ebony plug, fitted with a plate which fits close into the aperture. The plug admits of being more readily removed and replaced than a slide."

Then follows an excellent chapter upon "irritable ulcer of the rectum," which is thus described:—

"On examining the ulcer, without distending the rectum, the lateral edges only being presented to view, the breach of surface has the appearance of a *fissure*, —the term commonly given, but improperly, to this sore, which is obviously more than a mere cleft or rent in the mucous membrane of the bowel."

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In the treatment of "sensitive ulcer," and "spasm of the sphincter," an ointment composed of chloroform and zinc is highly extolled. In the treatment of hæmorrhoids the ligature is preferred to the knife. The mode of its application is thus described:—

"A curved needle set in a handle, with the eye near the point, and armed with a strong silk ligature, should be passed through the base of the pile from without inwards. The needle is then to be withdrawn, the ligature being left double. The loop being divided, the pile is to be strangulated by drawing the ligatures close round the base, and knotting them as tightly as possible on each side. . . . When the hæmorrhoids are large in size, a notch made with scissors on each side at the part to be girt with the ligature, just before it is tightened, will facilitate the separation without any risk of bleeding."

The most instructive portion of the work relates to the diagnosis and treatment of stricture of the rectum. Mr. Curling considers that this disease is much more common than surgeons suppose; neither is it suspected by patients themselves until the disease has caused considerable inconvenience and suffering.

"Indeed, it is surprising how great a length of time the general health will sometimes continue without being materially affected, even in cases of close contraction of the gut. The derangement of the digestive functions, and irritation kept up by the disease, in the course of time, however, undermine the constitution, and bring on hectic symptoms."

In the treatment of stricture of the rectum, the author recommends dilatation by means of elastic bougies. Several serious accidents are recorded, to enforce the necessity of care in the introduction of instruments into the rectum; even perforation of the colon is mentioned as having occurred in three instances, caused by rough and unskilful treatment.

The different operations for artificial anus are fully discussed. It will be seen by the following quotation the operation to which Mr. Curling gives preference:—

"In obstructions of the rectum, an artificial opening for the passage of the fæces may be made into the colon in the left groin, by the operation commonly called Littré's; or in the left lumbar region, by the operation known as Callisen's, modified by Amussat. A careful consideration of the advantages and disadvantages of these two operations leads me to give the preference to the former."

We recommend this little work to the attentive consideration of the profession.

A Practical Treatise on the Diseases and Injuries of the Urinary Bladder, the Prostate Gland, and the Urethra. By S. D. Gross, M.D., Professor of Surgery in the University of Louisville. With 106 illustrations. Octavo, pp. 726. Philadelphia: Blanchard and Lea. 1851.

The treatise of Dr. Gross purports to contain a description of all those diseases to which the urinary apparatus is subject, together with their treatment; and he has been tempted to write the work before us in consequence of the necessity which he himself had long felt of a complete systematic account embracing *all* these maladies. To the literature of the subject the author has paid great attention, which has assisted in no small degree to swell the volume to its present bulk, and has at the same time, we may add, conferred an additional value upon it; and it is pleasing to find that our transatlantic brother has been in no way niggardly in his quotations from, and praise of the labours of, those surgeons who have, in various countries, trodden with care the ground which he is cultivating.

The illustrations are numerous, for the most part well executed, and the majority of them are derived from well-known sources: we recognize many old friends, and amongst them some new faces. The plan now so commonly adopted of intermixing engravings with the letter-press in surgical works, is highly commendable, as the memory is thus twice impressed—on the one hand by words, and on the other, as it were, by their embodiment in drawing.

To say that there is much original matter in this work would be passing the limits of truth, and it seems to have been mainly the author's object to collate carefully and arrange systematically those materials, or the best portions of them, which are scattered through so many monographs, papers, &c., on the subject; so that in a single work may be contained the collective experience of many, and the most meritorious parts of all: hence, as a book of reference, more especially, the treatise is valuable.

Interspersed throughout the volume are records of cases, with here and there the reports in details. The adoption of this plan is judicious; but it is too frequently found, in medical publications, that the mode in which such plan is carried out tends rather to mar than increase the interest of the subject; because the cases adduced are often not sufficiently apposite or illustrative, and by uselessly adding to the bulk of the volume they lessen its value. To this charge Dr. Gross may safely plead "not guilty."

The Spine: its Curvatures and other Diseases; their Symptoms, Treatment, and Cure; to which are added some Remarks on Paralysis. By Charles Verral, M.R.C.S., Surgeon to the Hospital for the Cure of Distortions, Portland-road, and the Sea-Bathing Infirmary at Eastbourne, Fellow of the Medical Society of London, and late House-Surgeon to the Asylum for the Treatment of Spinal Deformities. 8vo. London, 1851.

Previously to entering into an examination of the volume before us, it may not be uninteresting to many of our readers—now that the treatment of the affections of the spinal column and of deformities generally has become recognized as a part of legitimate medicine and surgery, and honourable for men of science to pursue—to briefly trace the history of the institution which undoubtedly led the way in that onward progress of medical science, which has terminated by removing the treatment of these severe afflictions out of the hands of the empiric and mechanist into those of the

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members of the medical profession. The institution to which we have just referred was first denominated the "Society for the Treatment and Attendance of Poor Persons Afflicted with Diseases and Distortions of the Spine, Chest, Hips, &c.," and its consulting rooms were originally situated in Lowther-arcade, Strand; from thence they were removed, in 1840, to Howland-street, Fitzroy-square; and subsequently, in 1843, to Norton-street, Portland-road, Regent's-park.—Upon consulting the Reports of the charity, we find that it "*was founded in the year* 1836, *by Mrs. Henry Ogle, of Eastbourne*," for "the treatment and attendance *at their own homes*" of poor persons suffering under such afflictions, by "a mode of treatment for many years successfully practised in a part of that county, (Sussex,) and recently introduced in London to the knowledge of the profession and the public by the late Dr. Verral," whose services the Society secured by appointing him its first medical officer. As the patients of the charity were spread over a large portion of the country—the Report specifies thirteen different counties—and visited *at their own homes*, the services of a second medical officer soon "became absolutely necessary," and accordingly we find that on the 1st of July, 1839, the medical staff was increased by the appointment of Mr. Chance. After the appointment of Mr. Chance, the attendance upon the patients in London chiefly devolved upon him, while those residing in the suburbs and in the country still remained entirely under the care of the senior officer, Dr. Verral.

Until the death of Dr. Verral in 1843, the charity retained its original name; but immediately after that event its name was changed into "The Verral Charitable Society for, &c.," by the "*wish of its foundress* and principal supporters" (Report, 1843,) as "a tribute of respect to Dr. Verral, "for the talent and energy with which he had carried out the object of the charity all over the country. Upon the removal of the Society to Norton-street, Portland-road, the system of receiving *in*-patients was commenced, in consequence of which, in 1843, the charity, or a portion of it, was entitled the "Asylum," and more recently "The Verral Spinal Hospital, &c."

After the death of Dr. Verral—Mr. Chance having retired from office previously to that event—the two vacant offices were filled by the appointment of Mr. James Coles and Mr. Hugman; and we find, upon consulting the *Medical Directory* for the present year, that the present officers of "*The Verral Charitable Society*," are Mr. Hugman and Mr. Charles Verral.

The peculiar feature in this institution is the plan of attending persons with spinal disease *at their own homes*; and if such is the practice of the charity at the present day, and we believe it is, it cannot fail to be one of the greatest boons to the poor thus afflicted that is held out to them, even in this large and charitable metropolis.

From the account we have just given of this charity, it will be evident that every honour has been paid to Dr. Verral, even to the appointment of his son to the office of surgeon as soon as he could legally hold the appointment;* and we confess, therefore, that it was with the utmost astonishment and pain that we read the assertion, preface, page xvii., that "the hospital to which I have the honour to belong, *was founded* by my late father, some fourteen years ago." *Founded* by Dr. Verral! why, every report of the charity from its first in 1838 to 1846, copies of each of which we possess, distinctly states *that it was founded by Mrs. Henry Ogle*; and, moreover, in each of those reports, except that of 1838, at the head of the list of officers we find the name of that lady with the following title, "*Foundress of the Society* and Treasurer." Is it possible that Mr. Charles Verral is ignorant of the existence of these reports? Is it possible that he can be unacquainted with the well-known fact that Mrs. Henry Ogle was the kind and untiring patroness and friend of his late father? It can hardly be believed, and yet charity would lead us to hope that such is the case. We will quit the subject, feeling assured that should his work reach a second edition, he will see the propriety of desisting from the attempt to claim for his late father, that which his father, during his life, acknowledged to belong to his kind and benevolent patroness. But as we are upon the subject of foundership, we cannot refrain from the remark that the attempt to claim this distinction appears to be somewhat of a monomania, for upon reference to the Medical Directory, 1851, we find Mr. James Coles, of 22 Harley-street, describing himself as "*Founder* (!) of, and late senior-surgeon to, the VERRAL (!!) Institution for Diseases and Distortions of the Spine, &c." Perhaps this modest attempt to claim the foundership of an institution that had existed nearly seven years before the gentleman was even connected with it as one of the medical officers, has been the cause of the ill-judged effort on the part of the author to claim the title for his late father.

As the preceding remarks have far exceeded the limits we originally intended they should occupy, we must of necessity be somewhat more brief than we could wish, in our notice of the work itself.—The volume contains nine chapters, seven of which are devoted to the consideration of curvatures of the spine—viz., lateral curvature, angular projection, excurvation, and incurvation—one to rickets and one to spinal irritation.

The author informs us, in his preface, that the majority of works upon the subject he had "made it his especial duty to peruse, not only in English but also in French and German;" and again, speaking of the curability of lateral curvature, he says, "for my own part I am fully prepared to admit that every system of treatment possesses *some inherent excellence*; and it is to those who can best select from such systems that which is really useful and good, that must ultimately revert the laurels of success." In these quotations we have, in fact, the entire character of the work; and we can but

* Mr. Charles Verral's diploma is dated 1848.

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deeply regret, that with the immense opportunities for acquiring experience which Mr. Verral, by his own showing, has possessed for the last eight or nine years, he has not added very much more than he has to our stock of original information both as regards the pathology and the treatment of diseases of the spine.

In the chapters devoted to the consideration of the treatment of lateral curvature, the author strenuously advocates the employment of the combined agency of the following means:—1st, Recumbency; 2nd, Mechanical Extension; 3rd, Muscular Exercise; 4th, Mechanical Support; and 5th, Superadded remedies, by which is meant Friction, Bathing, and Tonic medicines.

The method of employing each of these numerous remedial agents forms the subject of a separate section, but an idea of his practice may be formed from the following abstract from pp. 90, 91: "Supposing that a vigorous system of exercises have been engaged in until eleven o'clock A.M., the patient should then lie down," say "an hour;" "at twelve the apparatus, (the author's spinal support,) should be applied until two P.M., and if possible exercise taken in the open air;" "at two P.M. the instrument is to be removed, and the recumbent position resumed during the time allotted to dinner." "The afternoon should be again devoted to exercises, frictions, and other manipulations, together with the employment of the instrument for two hours. Tea to be taken in the recumbent posture, without the instrument; after tea the instrument to be re-applied until bedtime, which is to be early."

After reading the above directions, we almost fancy we hear our readers exclaim, "but where is the patient to be found who would submit to such treatment, or the parent who would fully carry it out?" Why, the entire day is occupied, and the attendance of a nurse, or the surgeon, rendered constantly requisite. Surely the plan is laid down exclusively for the wealthy! Whether such was the intention or not, certain it is, none but the wealthy could afford either the time or the expense; and we may therefore ask what is to become of the children of the poor, who have but little money and less time, for their time is their money? That there are such cases among the poor, Mr. Verral himself informs us in a note to page 23, wherein he states,—

"I am in the habit of seeing *great numbers of pauper children* who suffer from this affection, (lateral curvature.)"

The instrument for supporting the spine alluded to in the previous plan of treatment is an invention of Mr. Verral's, and it certainly differs in construction from any we have previously seen; we, however, cannot perceive, from an examination of the wood-cut, how it can possibly exert the slightest power to restore a rotated spine to its natural position. In this, however, we may be deceived, or the property mentioned may not, in the author's opinion, be required, seeing that he has recourse to manipulations, &c., to remedy such a deviation, and that he only advises the instrument to be worn for a short period during each day. In speaking of the period when an instrument should be worn, the author says,—

"I have already condemned the employment of mechanical supports beyond a certain period during the day—endeavouring at the same time to point out *the imminent danger that is incurred by having recourse to them at all during the hours allotted to repose.*"

And again he says, if an instrument is worn more than six hours a day,—

"Any time beyond this serving only to debilitate the patient, and give rise to a dangerous amount of bodily prostration."

Any opinion more erroneous than the latter of the two just quoted, cannot well be conceived; and with respect to the former, we must ask Mr. Verral to reconcile it with the following recommendation of his own, page 66:—

"As it is of great importance to preserve during the night the ground that has been gained in the course of the day.....I generally place the patient in the prone or supine position, giving her the choice—*with the lateral shields so applied as to avoid the possibility of her assuming an injurious posture whilst sleeping.*"

We cannot quit the subject of lateral curvature without expressing our doubt as to the correctness of the author's diagnosis in the case of the lad, aged seventeen, (page 47,) "who, in addition to an extreme degree of lateral curvature, is suffering from paralysis of the lower extremities." Paralysis from lateral curvature is certainly new to us.

Although we do not exactly agree with Mr. Verral in his mode of treating lateral curvature, we perfectly coincide in the justice of the following remark, that, "not a year passes in which hundreds of children are not sacrificed to the false hopes of the parents, or the promises of the medical adviser, that they will get naturally and spontaneously well."

The fourth and fifth chapters treat entirely of angular projection, or caries of the spine, and its occasional attendant, paralysis. They are by far the best-written chapters in the whole work.

In the second section to this chapter we are informed that "after the period of puberty the disease is less connected with scrofula, and in such as these it is usually excited by rheumatism, (?) or occasionally from some syphilitic taint." If the author has any foundation whatever for including rheumatism among the causes of *caries* of the spine, we can but regret that he has not brought the cases forward, as they would certainly have possessed the merit of originality. In their absence we must regard the opinion as one directly opposed to all that we know of either of the diseases—i. e., of rheumatism and of caries of the spine.

In the section detailing the treatment, the use of the *prone position* is judiciously *insisted upon*, in which advice we perfectly and fully concur. For the purpose of efficiently employing the prone position the author recommends the prone couch

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invented by his late father; and we can testify, from what we have ourselves seen, that the author has in no way exaggerated the beneficial effects which result from its employment in the form of the disease at present under consideration.

The employment of the more severe counter-irritants—viz., setons, issues, and moxas, recommended by the author as occasionally necessary in treating caries, both with and without paralysis, is directly opposed to the views held by the late Dr. Verral; and judging from what we have ourselves seen, we decidedly coincide in the opinion that they are totally uncalled-for, if not absolutely prejudicial.

The credit of having invented the *prone couch* belongs *exclusively to Dr. Verral;* not so, however, the merit of being the first to adopt the *prone position* in the treatment of caries of the spine;* for this improvement in practice as *undoubtedly belongs to Bampfield*, and was published by him to the world, in his "Essay on Distortions and Diseases of the Spine and Chest," which essay obtained the Fothergillian Gold Medal of the Medical Society of London, and was delivered to the Society, Christmas, 1823—i. e., a period of two years before the *prone couch* was invented; moreover, the cases treated by the prone *position* narrated in the essay, go as far back as 1821, (vide cases 1 and 2 of angular projection,) while Dr. Verral himself informs us, in his paper read before the Westminster Medical Society in 1836, and published in each of the Reports of the Society for the Treatment of Diseases and Distortions of the Spine, &c., that he invented the prone couch for a young gentleman, aged sixteen, "who was accidentally placed under his care in November, 1825."

These being *the recorded facts* of the transactions, we regretted to find in the present volume the assertion that Dr. Verral invented his couch in 1823, (page 139,) followed up in the next page by the statement that the award of the medal of the Society of Arts in 1830 to Dr. Verral for his *prone couch*, "proved beyond all power of dispute *that he was the first to introduce the prone position*, as well as the originator of this useful surgical implement, a fact which some have attempted to deny, *since he was so immediately followed in his views and practice by another gentleman, Mr. Bampfield*, that a very small portion of the public were inclined to attribute to that practitioner the merit of first introducing this highly-approved position."

That the idea of the prone position may have been equally original in Dr. Verral as in Mr. Bampfield, we can conceive; but it is certain, at the same time, by reference to the published works of each of the gentlemen, that Mr. Bampfield *practised the use of the prone position in* 1821, or four years before Dr. Verral conceived the idea of his couch. With these facts in his possession, we are at a loss to understand the author of the present volume making the statements just brought forward, and more so at his antedating his late father's invention two years.

In concluding our notice of Mr. Verral's book, we must state, that if we have spoken severely of some parts of it, we have done so as an act of justice to those who have rendered good service to the treatment of spinal diseases. We regret that our duty has compelled us to speak in harsh terms of the first essay of so young a practitioner as Mr. Verral. The lesson, however, that we have given will probably not be without its advantages in counselling him as to his proceedings in the works which we perceive he is about to publish. Had Mr. Verral written a small pamphlet explanatory and illustrative of the practice of the late Dr. Verral, it might have rendered good service to the profession; as it is, the good to be found in the present large volume, we regret to say, is much mixed up with extraneous matter.

* This position is designated by Bampfield as the "facial horizontal."

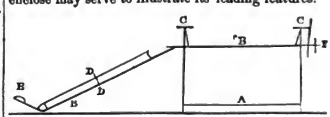
New Inventions

IN AID OF THE

PRACTICE OF MEDICINE AND SURGERY.

The Sling Fracture-Bed. By T. M. Greenhow, F.R.C.S., Senior Surgeon to the Newcastle-on-Tyne Infirmary.

Having placed in the Great Exhibition a specimen of the Sling Fracture-Bed, which I have employed for many years with great comfort, as I believe, to my patients, I would gladly request the attention of the profession to the advantages which it affords in the treatment of fractures of the femur, especially in the upper third, wherein these advantages are most conspicuous because most needed; and in compound fractures of the leg, wherein it secures reduction, and maintains a permanent position of ease, undisturbed even by the most elaborate dressing that can be required in extensive injury to the soft parts. A careful inspection of the instrument will render its application easily understood, but the slight diagram I enclose may serve to illustrate its leading features.



The stand *A* rests upon the bed; the splint *B* is supported by slings from four uprights at *C C*, and may be raised or lowered at pleasure by the screws at top. The thigh-splint rests on the bed at the ischium, and both behind and at the side can be lengthened or shortened to suit the length of the femur, by acting on screws at *D D*. A groin and a waist belt, passed through the strong loop *E*, fix the pelvis to the splint, giving ease and security to the patient, who is enabled, within certain limits, to move the pelvis, so as to relieve the irksomeness of an unvarying position, and for other necessary purposes. The extension of the leg is effected by acting on the screw at *F*, by which the foot-piece is drawn down gradually, but powerfully, and with the greatest degree of precision. The calf of the leg rests upon a movable piece of India rubber cloth or cross strips of bandage, capable of being most easily removed and replaced, when dressing and cleansing are required; and the outside thigh

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splint and loop *E* can easily be adjusted for either limb. Of course the injured extremity requires to be protected by pillows suitably arranged on the fracture bed.

I shall add to this short description a brief memoranda of cases in which the fracture-bed has proved eminently useful.

H. B——, aged thirteen, was admitted into the Newcastle Infirmary, Jan. 25, 1851, having sustained a severe compound fracture of the lower part of the left leg, in consequence of coming in contact with a chopping-machine at a paper mill. The fractured extremities of the tibia and fibula projected considerably through an extensive lacerated wound, and would not admit of reduction, in consequence of the powerful action of the gastrocnemius muscle, until the limb was placed on the sling fracture-bed, when, by careful action of the screw at the foot-piece the reduction was completely effected. From the nature of the wound extensive sloughing took place, and some fever followed the accident, and in the course of his recovery careful local and constitutional treatment was required; when the sloughs had separated the bones were exposed to a considerable extent; but towards the end of May the patient returned home cured, the leg being straight, and of proper length.

Gustave A——, aged twenty-five, a Danish sailor, admitted February 23rd, with fracture of the left femur in the middle third, in consequence of falling from the ship's mast, was placed on the sling fracture bed. In April he got on to crutches, and in May left the hospital well, the fractured limb being of natural length.

John S——, aged forty, superintendent of police, admitted February 24th, with fracture of left femur below the trochanters, in consequence of falling on the railway platform in descending from a carriage while still in motion, his cloak having become entangled in the step. Complains of great pain at the hip on the slightest movement of the limb. He was immediately placed on the sling fracture-bed, and all pain or uneasiness soon ceased. On April 6th he was released from the fracture-bed, a broad leather splint was applied over the hip, and he soon got about on crutches. On the 16th he returned home, gaining strength rapidly.

Thomas S——, aged forty-nine, merchant's clerk, admitted April 19, 1851, having a comminuted compound fracture of the left tibia a little below the knee, occasioned by falling on some stones in getting out of a boat. The wound was not large, but the fragments of bone were much displaced. He was placed on the sling fracture-bed. On May 10th the wound was healed, but he had soon afterwards an attack of rheumatism, which somewhat retarded his acquisition of strength. On July 4th he left the hospital, having gone about for some time on crutches, the leg being of proper length, and free from deformity.

Ann M'K——, aged eighteen, admitted April 24th, 1851; comminuted fracture of femur from being caught in machinery. Cured June 5th.

Margaret G——, aged seventy-seven, admitted June 16th, 1851, with fracture of the neck of the left femur, within the capsule, in consequence of falling down by her own fireside in a fainting fit. The limb was placed on the sling fracture-bed, where it has lain very comfortably. Some feverish excitement which followed the accident has subsided, and she is as well and comfortable as can be desired.

The following cases have been treated in the infirmary under the care of my colleagues:—

James J——, under Mr. Heath's care; compound fracture of tibia and fibula. Very bad case, but recovered well.

Thomas T——, aged forty-two; under Sir John Fife's care; comminuted fracture of right tibia and fibula, low down. The patient being affected with delirium tremens rendered it very difficult to maintain the position of the limb. Dismissed, cured, in about eight weeks.

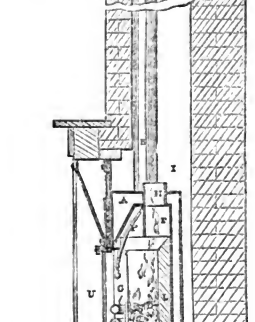
James F——, also under the care of Sir John Fife; compound fracture of tibia and fibula, near the ankle. Still in the house, but doing well.

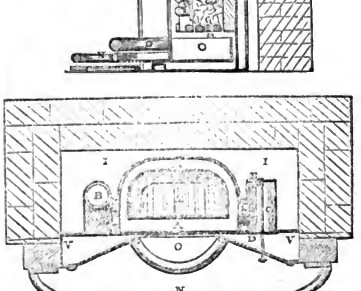
Hugh C——; treated by Mr. Potter; compound fracture of tibia. Recovered well.

These few cases of recent occurrence, will serve to show the application of the sling fracture-bed. In the thigh cases, ease to the patient, with a certain freedom of movement without displacement, and the maintenance of the necessary degree of extension, are the advantages it ensures. In the leg cases, perfect reduction, facility of dressing, and ease of position, are sources of satisfaction both to the patient and the surgeon.

Noirsain's Stove.

THE object of this invention will be best understood by a reference to the engravings, and the following description of them:—





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The soot and smoke which pervade the atmosphere of London are the natural consequences of the condensation of smoke, which occurs in the chimneys of the greatest part of the grates and stoves in ordinary use.

By regulating the proportion of the opening or section *G*, of the fireplace, to that of the passage, *I*, of the chimney, Mr. Noirsain is able, by means of his apparatus, to raise the temperature of the flue to a sufficient degree to entirely prevent the condensation of the smoke passing through it.

When combustion is produced in an iron chamber, *F*, having an opening, *G*, for the emission of the heat, and another, *H*, for the escape of the smoke, surrounding at the same time this chamber with a second, also of iron, a receptacle, *A*, is formed, in which the air may be rarefied, and conducted by a passage B^1, into a canal or flue, *B*, which has its orifice at the superior part of the chimney, and by a circular passage, C_1, into a second flue, *C*, which has its orifices at the lower part of the chimney.

It is by means of the openings at the two extremities of the chimney that it is possible either to use the apparatus for the purpose of heating or for that of ventilation.

The two orifices of the tube, *C*, are furnished each with a valve, *D* and *F*, which are so managed and connected, that when one is opened the other is closed, and *vice versâ*. If the valve *D*, which communicates with the chamber, be open, the atmospheric air will enter the orifice, *B*, and becoming rarefied, will pass at once into the chimney. If, on the contrary, the valve *D* be closed, and the valve *F*, which communicates with the flue be open, and *E* closed, the atmospheric air will enter by the orifice, *C*, and becoming rarefied in the iron chamber, will pass off by the superior part of the chimney. Thus, by means of the two valves, *D* and *E*, either an ascending current of hot air, or a descending one of cold air, can be obtained at pleasure in the same tube, *B*.

A careful examination of these stoves leads us to the opinion that they will effect the object contemplated by their inventor. Already, we are informed, have orders been received for their erection in various large rooms, and amongst others, in the council-room of the College of Surgeons, in which the stove was tested some time since, at one of the College *soirées*.

REMARKS ON THE HYDRO-ELECTRIC CHAIN OF DR. PULVERMACHER.

By Golding Bird, M.D., F.R.S.

The ingenious modification of Volta's pile, contrived by Dr. Pulvermacher, of Vienna, has attracted so much attention, that the following account of the value of the apparatus, as a source of electricity, may perhaps not be uninteresting, at least to those who may not have had time to devote much attention to the study of these subjects.

Everybody is aware that the apparatus contrived by Volta consisted of plates of metals, differing in their respective affinities for oxygen, alternated with pieces of cloth dipped in a saline solution. Thus, in the most common modication of this pile, a plate of copper is placed on the table, on this a plate of zinc, and then a piece of flannel or cloth, dipped in a solution of common salt; on this a second plate of copper, and so on. The theory of the apparatus is so well known, that it is unnecessary to say more than that, under the chemical action of the saline fluid on the zinc, the combined electric fluids existing normally in both the two metals employed, are separated,—the positive electricity being found on the zinc, and the negative on the copper surface. Wollaston's and Cruikshank's troughs are but modifications of the same contrivance,—cells filled with the saline fluid replacing the moistened cloth or flannel. The cumbrous nature of these contrivances, the time required to excite them, the rapidity with which them intensity of the electric current diminishes, as well as the tact and management required to apply the current they evolve, have always presented most serious obstacles to their adoption into medical practice. On this account they have been almost completely replaced by the different machines for furnishing a current of induced electricity. These, it is true, possess many advantages, and become most important appliances in the treatment of disease, as has been repeatedly pointed out by myself and others. Still we have often felt the want of an apparatus by which an uniform and uninterrupted current of voltaic electricity could be at our command at a short notice, and without involving the necessity of any manipulative tact in its application. The hydro-electric chain completely fulfils these desiderata.

The apparatus I have used was placed in my hands, during last winter, by Dr. Pulvermacher himself. He is a scientific man, and well acquainted with physical science generally, nor is he, I presume, responsible for the manner in which his invention has been extolled, as a sort of universal panacea, by the London agent, in the public advertisements. Each element of this battery consists of a small piece of wood, around which are wound two wires, nearly but not quite in contact, one of these wires consisting of zinc, the other of gilded copper. These represent the plates in Volta's pile; each terminates in a ring, by which it is connected with the wires of the next link or member of the chain, the zinc of one being united with the copper of the next, and so on. When one of these links is immersed in a fluid capable of exciting a chemical action on the zinc, enough is retained by capillary attraction between the folds of wire to disturb the electric equilibrium of the metals, and to throw the negative and positive fluids into a state of current. The exciting fluid recommended by Dr. Pulvermacher is common vinegar, and if one of his chains be immersed in that fluid for a minute, and then lifted out, so that all not retained by capillarity may drain off, it will be at once fit for use.

The electricity excited by this apparatus is necessarily small in quantity, as the amount of electricity evolved must be in a ratio with the intensity of the chemical action exerted on the more oxidizable metal; yet its tension is tolerably high. It is indeed sufficient, both in quantity and tension, for the development of physiological phenomena. The following experiments will illustrate these properties, a chain of fifty alternations being employed:—

A. A thin piece of platinum wire being attached to the terminal links, they were immersed in water acidulated by sulphuric acid, and very distinct evolution of exceedingly minute bubbles of oxygen and hydrogen were evolved from the two wires. The dilute acid being replaced by a solution of iodide of potassium mixed with starch, iodine was almost immediately set free at the wire where the positive current entered the fluid. The quantity of these electrolytes decomposed was exceedingly small, as the electrolytic power of the evolved current would of course bear relation to the amount of effective chemical action going on in the links of the chain.

B. The platinum wires were then connected with an astatic galvanometer; the wires were immediately deviated under the influence of the current, but the latter was not sufficient to retain the needles at right

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angles to their normal position. The astatic galvanometer was then replaced by an ordinary one, having a coil of thirty folds of wire, and carrying a magnetic needle five inches long. The current was barely able to produce a permanent deviation from the magnetic meridian of five degrees. This feeble action on the magnetic needle is explained by the small *quantity* of electricity circulating through the chain.

C. The chain being held in a vertical position by one end, the terminal link was allowed to touch for an instant the lower plate of a condensor, six inches in diameter, in connection with a gold-leaf electrometer. On lifting off the upper plate the gold leaves separated to the extent of a couple of inches. When only half of the chain was brought in contact with the electrometer, considerable divergence also occurred. This experiment well illustrates the comparative high tension of the evolved electricity.

D. The first and last link of the chain being placed in cups of water, and a finger of each hand being immersed respectively into the two cups, a smart shock was experienced in each finger. This shock was repeated every time one finger was *raised out* of the fluid and re-dipped. But no shock was felt all the time the finger *remained* immersed, as the electricity passed in a continuous stream through the body from one end of the chain to the other; the physiological phenomenon of "shock" being produced only at the moment the current first entered the body. This is of course the same with all voltaic apparatus which yield an uninterrupted current.

These experiments are sufficient to demonstrate the electro-genic power of Pulvermacher's apparatus, and to point out that the current evolved is small in quantity, but of moderately high tension.

When a continuance of sensible shocks is required, an ingenious apparatus, contrived by the inventor of the chain, may be used. This consists of a small helix of thin wire fixed in a glass tube; one end of this wire passes through a cork in the tube, and ends in a hook: the other end is free, and is barely in contact with a metallic plate, (also furnished with a hook,) which closes the other opening of the tube. On connecting a chain of fifty elements to each of the hooks of this apparatus, the first and last link being grasped in the hands, a rapid succession of rather violent shocks will pass through the arms. These occur in consequence of the slight motion communicated to the chain by the hands, being sufficient to make the helix vibrate, and thus rapidly approach and recede from the plate at one end of the tube.

It must not be supposed, however, that sensible shocks are required to develope physiological phenomena or therapeutical effects. We are chiefly indebted to the laborious researches of Dr. Marshall Hall for teaching us the vast amount of therapeutical influence developed by a continuous current of voltaic electricity. I cannot, indeed, too strongly impress upon those who have to treat a case of old paralysis (unconnected with spasm) the vast importance of allowing a current of voltaic electricity to traverse the palsied limbs persistently for half an hour or more daily for weeks and months, nor to be disappointed at not witnessing any *immediate* good results. Nutrition of the limb is certainly thus increased, its waste and emaciation prevented, at least to some extent, and the probabilities of cure are much increased. Pulvermacher's chain, when once excited by immersion in vinegar, soon begins to evolve a current of decreasing intensity; but so long as even a small quantity of fluid remains unevaporated between the folds of wire, evidence of the circulation of electricity can be made out by the electrometer. A moment's re-immersion in vinegar will at once restore the energy of the current.

The advantages of this apparatus to the medical man consist in its giving him a means of obtaining a current of electricity, of amply sufficient tension and quantity for all physiological purposes, at a moment's notice. He can, moreover, diminish or increase the tension by making use of a greater or smaller number of links. He can make the current continuous or interrupted, painful or painless, at will,—and he has, moreover, an apparatus so easily managed as to require no especial tact for its application. On the other hand, it must be recollected that the current evolved has no *peculiar* properties, and that it will effect nothing more than that evolved by other means. It is, indeed, deeply to be regretted that so convenient a source of electricity runs the risk of losing favour in the sight of educated men generally, and of our profession in particular, by being injudiciously puffed in the public prints, by advertisements claiming for it a medical influence it in no wise possesses.

THE HARVEIAN SOCIETY.

THURSDAY, OCTOBER 2, 1851.—DR. CHOWNE, PRES.

THE Harveian Society resumed its meetings on the 2nd inst., when Dr. Chowne, one of the presidents, delivered the opening address. The meeting was well attended.

Dr. CHOWNE remarked, that through the many years during which the Society had held its sessional meetings, it had been characterized by a steady progress in the path of usefulness, as a member of the great machinery by which medical science is constantly in the course of being promoted, and its healthy tone preserved. Its career had been marked also by that admirable good feeling which had rendered it social in the highest degree, and had cherished, along with the pursuit of medical knowledge, so diligently, so ingeniously, and so grandly cultivated by the great man whose name it bears, the kindly and amiable qualities and dispositions of which his generous nature was an example. Although many of those who first gave origin and life to the Harveian Society have passed away, the structure which they had aided in rearing, had been watched over by some of those able and zealous men who were its joint parents, and by their continued aid and example had been preserved in a state of efficiency which has brought to it a succession of new members, who, in their turn, have contributed to the support and the stability of what might be well designated a good work. Of all the advantages accruing to medical science, perhaps few are, in the aggregate, greater than those arising from the written and oral communications of which medical societies are at once the focus and the prism, where the different hues of doctrines and opinions become individualized and accessible to scrutiny. We must not assume, even with regard to those who may be numbered amongst the seniors of the profession, that medical societies are unprofitable; so rapid is the march of discovery, that new facts and new treasures are evolved, the growth even of their own time, and often the offspring of their own investigations and communications. The younger members of the profession coming upon the field, finding it in a higher state of cultivation than that in which their seniors found it, and succeeding to a more expansive domain of already-acquired knowledge, may be said to step forth in their career on the vantage-ground bequeathed by the labours of those who have preceded them. As the philosophy, and the scientific research of all periods, and on all

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subjects, naturally flow into each other, tending in their results to one great end, and constituting one great fact, comprised in the comprehensive word civilization, so we may regard the human mind as constituting one great and ever-operating agent, carried on in perpetuity from sire to son, adding fact to fact, and linking knowledge to knowledge; hence we can scarcely fail, in contemplating either the present or the future state of science, to mingle with our thoughts a retrospective interest for "every link of that long chain's succession," by which science had been advanced. When we compare the present state of scientific knowledge with that of the past, we are scarcely free from the danger of vainly believing, that stronger mental perception and higher intellectual power had been even the natal endowments of the later generations; but the earliest records of our race admonish us, that man, in his natural relations to the vast and uniform scheme of creation, has remained uniform. Neither facts nor traditions indicate, nor even faintly intimate, that his senses have changed, either in their source, their phenomena, or their kind; or that his powers of comprehension were of feebler character, denying to the mind perceptions of beauty and order, capabilities of contemplation, of reason, and logical deduction. We trace these, on the contrary, to be the mind's inherent faculties, as far back as research can carry us; and even where precise and certain knowledge ends, there still opens to the view yet antecedent periods, in which may be descried the moral evidence of still antecedent intellectual greatness; and in the works descended from the great writers of antiquity, we find biographic treasures recording the lives of men, who had, in still preceding centuries, acquired renown for every gracious and generous trait of character, and for great and noble actions.

After citing numerous examples of early philosophic, scientific, and moral greatness, Dr. Chowne proceeded to say:—When we review the circumstances and the agencies by which the mind is cultivated and science advanced, none appear to be more prolific, or of more ancient usage, than the organization and proceedings of societies. Even the earliest accounts represent individuals as assembling in groups and companies, incited by attachment to a party, or interest in a subject, animated by the same spirit and the same impulses as these that inspire and bring together groups and societies, which meet and discuss and deliberate in the present day. The advantages of communion and discussion were illustrated in the Symposiques or Table Entertainments of the ancients, as recorded by Plutarch. These were, indeed, part of the *education* of the time, and the discourses were, not accidentally but systematically, the canvassing of questions of instruction and interest, either philosophical or philological. Individual talent, working vigorously, *although* alone, is not powerless in aiding the advance of science; but individuals combined in numbers constitute an organ of intellectual strength. Such a combination (happily, one only amongst many) is the Harveian Society,—for the time being our society,—presenting to us an object of interest as regards both the time being and the future. For the time being, we may ourselves reap the fruits of its instructive lessons, and derive pleasure from its agreeable associations. With regard to the future, there is a graver interest in the gratification of identifying our labours, however humble, with the labour, and the zeal, and the talent, which, from age to age, are tributary to that great stream of knowledge, to draw from which is a pleasure, but to add to which is a pleasure and a pride. Many are those of our medical brethren whose days and nights are, it may be said, swallowed up in the active exercise of their bodily as well as mental energies, who have no leisure for abstraction and literary labour, but who still are not without the mental vigour, the intellectual acuteness, the zeal, and the genius on which great names are built, nor without the kindred impulse to exercise such faculties in the advancement of the science they have embraced. To those ardent men, such societies as the Harveian Society afford a field for contributions to the general culture,—a kind of home where the concise and, although perchance informal, still practically useful monograph meets a cordial welcome and a respectful reception, and, moreover, a position of security in the society's archives. Such societies, moreover, afford to that quality inherent in the human disposition, which delights in generous competition, an arena where doctrines even not congenial with all judgments may be discussed, at once under the full vigour of mental strength, and the guarded courtesies of generous, however earnest, dissent. The mind, too, is always interested in investigations, of which truth is the object, and finds pleasure in the mental exercise: the objects of our profession, moreover, are benevolence, and the mind is gratified in the pursuit of a source whence benevolent results may spring.

The meetings of the Harveian Society are held in the centre of an area thickly inhabited, and giving scope of observation to a numerous brotherhood of medical men, qualified for advancing its objects, many of whom are amongst its members, and are zealously engaged in doing so, not forgetting that the advance of every branch of science is in the light which combinations of individual contributions have shed; that the loftiest flights of modern discovery are not without their prototypes in antecedent ages; that the accomplishment of the grandest aims in science and in art are but superstructures reared on foundations already laid. Analytic, forensic, and animal chemistry, are branches grafted on a stock which has been a growing wonder from times almost beyond research. New facts, demonstrated by the microscope, are the fruits of a discovery of the focal properties of the lens, even centuries prior to the Christian era. Hippocrates listened, with his unassisted ear, to thoracic morbid sounds: and the stethoscope, the beautiful invention of our own time, has rendered familiar to our ear a mode of diagnosis indicated by the great physician of antiquity: and in regard to general science, we perceived that to our great progenitors was known, more than two thousand years since, the power of the Archimidian screw—that instrument which constitutes one of the means enabling us to traverse the ocean, almost in proud defiance of winds, and currents, and tides: we exult in the performance, but forget the share which an epoch of remote antiquity might claim in the achievement. To a period not less remote we are indebted for our first knowledge of the power obtained by combinations of the pulley, and the lever, and other mechanical forces; and that great triumph of our day, exemplified in the stupendous tube that spans the Menai Straits, and connects Wales with the Isle of Anglesey, identifies, in the means by which it passed through the various processes of construction and elevation, the name of Archimides, and a discovery more than twenty centuries prior to the accomplishment of the gigantic task. The peculiar substance, "Amber," known to the members of our profession as the ηλεκτρον of the Greeks, and as the *kah reba*, or grass attractor, of the Arabs, was known to Thales, of Miletus, for its power of attracting and repelling light bodies; and similar properties were attributed by Theophrastus and by Livy to other sub-

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stances. The peculiar properties in these substances have presented to philosophers of every succeeding period, phenomena, the objects at once of curious and anxious research, incited by their marvellous qualities. To their *first discoverers*, these were visible in simple phenomena only, and in feeble force; but future labours have acquired knowledge and command of the mysterious element, transcending all others in the subtlety of its nature, as in the majesty of its power; and although it is the intellectual genius of the age we live in, exercising the high faculties bestowed on man by the divine Author of the universe, which has wrought out of the joint discoveries of ancient and of modern times, the power to call forth and direct and control the energies of electrical phenomena, it is to philosophers who laboured in the same field two thousand four hundred years since, that we must ascribe the origin and root of that knowledge which has enabled the discoverers of our own time to elicit from brute matter a terrestrial lightning, and to give to that lightning a mission and a tongue; our thoughts, our words, traverse beneath the ground and beneath the sea, and in an instant are declared at distances of hundreds of miles, and may hereafter be, at distances indefinite. As every generation is pre-eminent in succession, and in turn becomes ancillary to the pre-eminence of its successor, and as our own has risen on the labours of generations past, so the labours of the present may serve as steppingstones to generations, and to still mightier achievements, yet to come.

Dr. Chowne presented to the Society three daguerreotype portraits of a female, the subject of a lusus naturæ, having whiskers and a beard, even more profuse than are seen in the generality of men. Dr. Chowne stated that he was applied to on behalf of a female, (whose name is Josephine Boisdechine, about twenty years of age,) by a person, who said he had the intention of marrying Josephine, but that her sex was disputed. With reference to this point, he applied to Dr. Chowne for a certificate. Dr. Chowne states that with the exception of excessive growth of hair, there is nothing in her conformation indicative of a doubtful sex. The portraits exhibit, in different points of view, full large mammæ, not less strictly and critically feminine than the beard and whiskers are masculine. Although the beard and whiskers are both abundant, and the latter grow even forward over the cheek bone, the upper lip is remarkably free from similar growth.

We shall publish the case in full in a future number.

MIDDLESEX HOSPITAL.

ABSTRACT OF THE INTRODUCTORY LECTURE DELIVERED AT THE MEDICAL SCHOOL, BY MR. THOMAS TAYLOR.

After some few introductory remarks, Mr. Taylor commenced by pointing out the comprehensive nature of the science of medicine, and took a rapid review of the various sciences a knowledge of which was necessary to the character of a highly educated practitioner. He stated that medicine was both a science and an art—an art, as regarded the mere treatment of disease, and a science, as regarded the facts and reasonings upon which that treatment was founded; that without the aid rendered by anatomy, physiology, chemistry, &c., medicine was a pure empiricism, guided by no rules save those afforded by chance observation, incapable of improvement, and incapable of replying to the various questions of jurisprudence, public health, and the moral responsibility of individuals, which society demanded.

Adverting to the number of subjects to which the student was compelled to direct his attention, he remarked, that as it was impossible for the majority of them (during the short space of time allotted to their hospital studies) to gain more than a superficial acquaintance with many of these sciences, it was highly essential that they should have a clear conception of those which were the most important, and without a knowledge of which it was impossible for them to acquire any useful knowledge of their profession. He proceeded to state, that the three great pillars on which a scientific and practical knowledge of medicine were founded, were—

First. Clinical experience, derived from observation of the sick in the medical and surgical wards of an hospital, and from the duties of an accoucheur.

Second. The anatomy of the human body, both in its healthy and in its diseased state.

Third. Chemistry.

The elementary nature of these studies was demonstrated by showing that the sciences of physiology and pathology were derived solely from facts and arguments derived from them: and the lecturer then proceeded to point out the manner in which he considered each of the three should be studied.

In reference to the study of anatomy, of which it was said that it was impossible to know too much, the student was recommended not to commence by first learning the bones in detail, but to acquire a general knowledge of the human body, its different regions, the position of the viscera, and the functions they performed, the structure of the heart, and the general course of the blood through the larger arteries and veins, together with the general distribution of the nerves and absorbent vessels—to acquire, in fact, a popular view of the structure of the body before studying the minutiæ of each individual part.

The necessity of frequent and careful dissection as the only means of obtaining a useful knowledge of anatomy, and the serious moral responsibility which the surgeon incurred who undertook to perform a serious operation in surgery, having a mere book knowledge of anatomy, was enlarged upon.

The claim of chemistry to be regarded as a primary element of medical education, was defended, not on account of its direct application to the art of pharmacy, but on account of its close connexion with physiology and pathology; the observations of Dr. Prout and Mr. Abernethy on this subject were quoted, and some instances given of the occasional utility of the chemical art in medical diagnosis.

The application of chemistry to medical jurisprudence next came under notice; and the disadvantages as well as the injustice of requiring from the medical man who happened to be called to a case of suspected poisoning, the chemical evidence necessary to establish the case, was fully commented on.

Mr. Taylor observed that the legislature seemed to think very little of the trouble attending a chemical analysis of the contents of the stomach, which might occupy several days, since it afforded the medical man no additional fee for performing this by far the most onerous and the most responsible task.

In place of the present imperfect system, Mr. Taylor recommended that the medical profession should urge upon the government the necessity of having a certain number of individuals selected from the ranks of the profession, and eminent for their acquaintance with chemistry and general science, upon whom should in every case devolve the task of giving chemical and other evidence upon all matters of criminal jurisprudence.

Some plan similar to that proposed, would, Mr. Taylor considered, be soon rendered necessary; for,

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owing to the facility with which arsenic and the more ordinary poisons were now detected, these substances would soon be abandoned as the means of destroying life; and owing to the rapid manner in which knowledge was diffused through every class of society, the murderer would quickly learn to select his weapons from those substances which at present almost defy the art of the chemist to detect.

The lecture concluded with an earnest appeal to the students to prosecute their studies with the most determined industry. No talent, no genius, no facility of learning, would compensate for idleness: the subjects which they were required to learn were far too numerous, and the time allotted for their acquisition far too brief, to allow of more time being spent in recreation or amusement than was absolutely necessary for the health of the body and the reinforcement of the mind.

By reference to the history of the most distinguished men in science, literature, and medicine, he showed that the possession of intellect would have been a useless gift had it not been cultivated with the most patient industry; that no species of knowledge was intuitive, and that the primal curse applied to the exertions of the intellect as well as to those of the mind. The students were finally exhorted not to remain satisfied with a mere knowledge of the practice of the profession,—above all things, not to consider their education as complete when they left the walls of the hospital, but to continue the habit of constant observation and frequent study. By so doing, it might be their fortunate lot to hand down to posterity a gift as valuable as that of vaccination or of the anæsthetic properties of chloroform. The field for observation in medicine was, he regretted to say, boundless, and notwithstanding all that had been done, still offered a rich harvest to the diligent cultivator; pathology was still in its infancy, and therapeutics as a science existed only in name.

Miscellaneous Correspondence.

"Audi alteram partem."

MEDICAL ASSISTANTS.

To the Editor of THE LANCET.

SIR,—Some threescore years ago, the period of time occupied in the education of the general practitioner was much the same as now, namely, about five years and a half, but it was passed very differently; in those days it was supposed that five years' contact with a practitioner of the healing art, would, by some process of professional incubation, produce another practitioner, in the same manner as at the present day a weaver, or any other craftsman, will in a few years produce another weaver. Only the odd six months were passed in London, to attain some knowledge of anatomy and witness the operations; as an apothecary, there was no examination for him to pass; as a surgeon, he now and then presented himself at the Surgeons' Hall of that day, but this was by no means the general rule. Thus educated, he was pronounced fit for practice. The wisdom of this age rightly demands that the major portion of this time shall be passed at a recognised school of medicine and surgery, to learn the science of the profession, as contrasted with its mere art and mystery. With your permission, I will sketch the young practitioner of the present day, just after leaving hospital, and offer some advice as to his future career.

I will suppose that he has been a student in the strict acceptation of the term, and therefore he has passed with honour to himself and credit to his school. He is intimately acquainted with anatomy; can demonstrate every square inch of the human frame; has a fair knowledge of the theory of medicine; is well up in chemistry; knows sufficient botany; and has a critical eye for operative surgery. These are sound respectable attainments, yet for all this he is no practitioner; for with some few exceptions, he has hitherto been a mere spectator of the healing art, standing by while another has practised and prescribed for him; and this, I take it, is in some sort like seeing a person eat a repast and eating it yourself. A student cannot acquire knowledge and experience with equal facility at one and the same time; for in hospital life, the greater part of each day is passed in the attainment of the former; either in dissecting, attending demonstrations and lectures, or in reading. But the requisite amount of knowledge is at last attained; he goes up, he passes, and must now turn it to useful account. Very many at once commence practice, but this is objectionable. If he wishes to qualify himself as a safe, thorough practitioner, the best course he can pursue is to take an assistantship for one or two years; by this means he will be able to test his well-stored knowledge, practise his eye in the physiognomy of disease and all-important art of diagnosis; attune his ear to the morbid music of the thorax; educate his finger in the department of obstetricy, and gain good opportunity of seeing disease in all its varied shapes; in short, put in practice that which he has been taught. He will see when it is best to follow one line of treatment, when another; he will learn, perhaps, the difficult art of doing nothing, or, in other words, how to follow the expectant method. Besides this, he will witness the various ways of employing the light and heavy artillery of therapeutics, and become skilled in the same. He will find time to follow a sound and extended course of reading; will enjoy the advantages of a more or less well-stored library; be able to analyze and arrange his knowledge, and at the same time learn how to handle those six divine remedies—mercury, iodine, quinine, opium, tartar-emetic, and Epsom salts.

If he has passed his apprenticeship in town, he will do well to take an assistancy in the country, and *vice versâ*. The more preferable plan is, to make an engagement for some definite time; for instance, one or two years, or perhaps what is still better, make two such engagements for one year, each with different parties, thus witnessing a more diversified range of practice. During this time how much valuable knowledge may be obtained! He must now act for himself, and, perhaps, feel for the first time in his life the real responsibility of his calling; his talents will be constantly put into requisition; his powers of observation will be taxed, and by the exercise of these, the aid of books, and professional conversation, he will largely benefit. In surgery, he will learn the time to be heroic; when it is necessary to be radical; how to be conservative. In practice of medicine, he will form some definite ideas as to what really is and is not fever; witness an instance or so of that terrific disease, puerperal convulsions; will learn how to distinguish between some forms of pneumonia and common continued fever; become acquainted possibly with the fatal and mysterious connexion that exists between erysipelas and puerperal fever; and have a case or two of operative midwifery; or, to say the least, will learn a valuable lesson in seeing how rarely instrumental aid is really required at all. Such are a few of the more important points of practice, amongst a thousand others, with which he will become acquainted; and, sir, I ask, is it not far better that he should become familiar with these serious matters, while another party shares the anxiety and is re-

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sponsible for their issue, rather than at once embark in practice, wanting that confidence such experience supplies?

It was customary for the late Mr. Key to observe, that in case of illness he would at all times freely place his life in the hands of a young surgeon fresh from the hospitals. The observation was good as regards the eye and the hand; but where accurate diagnosis is concerned, some head-work, the result of experience, is absolutely required. The remark may appear singular, but I have actually known more than one instance where a surgeon has walked out of Lincoln's-inn-fields with flying colours, who has never so much as opened a vein, or extracted a tooth. It should be remembered, also, that all doctors make mistakes; and since the young make more than the old, now is the best time to commit a few. The larger the practice, the better for the assistant, such as have union appointments being preferred; especially where there is an infirmary attached. Here the young surgeon can do much: for instance, he can follow discase into the dead-house; obtain frequent post-mortem examinations; and can at such times go through nearly all the operations, from the extraction of a tooth to the capital operation of lithotomy; taking care, in the first instance, to replace the tooth in its socket, and in the latter, to repair the incision through the skin. Then, again, the parts of hernia can be now and then examined; the surgical arteries repeatedly tied; and the amputations performed, with the exception of dividing bone. I do not advise that all these operations be performed on one and the same subject; but opportunities for post-mortem inspections are so frequent, that a mere incision or two, provided they are neatly sewn up again, are never objected to; for with the uninitiated all this passes for what they harmlessly suppose to be orthodox examination.

Some unhappy comparisons have been made respecting the salary of medical assistants: it is true the remuneration is not very large, but then the majority of practices are by no means extensive; neither are they profitable, especially where there is a numerous pauper population, and the aid of an assistant most required. I should say, that from thirty to forty pounds per annum is a fair consideration, especially for a first engagement; and in after-life, when the assistant in his turn requires assistance, he will think the same. It will be seen throughout, that the future practitioner of medicine has been considered; on the part of the principal it should be remembered, that his assistant is a sojourner in the land, a stranger among strangers, but also a brother practitioner; his equal in all things, perhaps his superior in some; and it behoves all those who require the aid of these gentlemen to treat them as such, in thought, word and deed; and then, on the other hand, the courtesy and respect due from a junior to a senior, will be cheerfully accorded. It will tend to mutual confidence, if a contract be entered into on the part of the assistant; agreeing not to practise within a given distance for a certain time. I am persuaded this is the most satisfactory plan, and decidedly recommend it, for it sets aside all misconstruction of each other's acts. It would come with better grace from the assistant in the shape of his own proposal, and the following is a legal form:—

I, A. B., being this day engaged to Y. Z., of , in the county of , as his professional assistant, at a salary of , in consideration of this said engagement, do covenant, promise, and agree, with and to the said Y. Z., that I will not practise medicine or surgery within miles of ; and for the due observance of this promise and agreement, I bind myself unto the said Y. Z., in the sum of , hereby declared to be designed, not as a penalty, but as and for liquidated damages.

Witness my hand and seal this day of , 185 .

Signed, sealed, and delivered,
in the presence of J. K.

Perhaps it is as well to observe, that a legal seal is simply a legal fiction, and that a mark of any shape made with a pen answers all intents and purposes. Half a sheet of paper suffices for the above; and if, unhappily, any difference should arise, rendering it necessary to put it in force, the same must be stamped, and it forthwith becomes a legal instrument.

It has been shown, Sir, that the assistant enjoys many advantages; a year or two can be passed in this way both agreeably and profitably; it is a sort of transition stage from the freedom of hospital life to the restraints of private practice; it affords some wholesome lessons touching the duties of practitioners towards their patients; and in respect of moral conduct, it teaches that, to succeed in this honourable profession, a medical man must be like Cæsar's wife, namely beyond suspicion.

I am, Sir, your obedient servant,
W. N. Spong.

THE "GREASE" AND COW-POCK.

To the Editor of The Lancet.

Sir,—Having read a most interesting report in the "Mirror" of your most valuable journal, illustrating the contagious property of the matter secreted from the "greasy" heels of horses, I am struck with a remark of Jenner's, that he fancied that the men "who usually milked the cows when he made his observations," carried the matter secreted from the "greasy" heels of horses to the abraded cows'-teats, and that thus the vaccine-pock was formed. If this be the fact, it is an interesting question, Why, on a cow, it has no baneful influence, still, on man, may prove fatal?—and how far this may apply to other animal poisons, I leave it to others to decide.

I am, Sir, your obedient servant,
M.R.C.S.L.

TREATMENT OF DIARRHŒA BY SULPHURIC ACID ALONE.

To the Editor of The Lancet.

Sir,—I beg to send you a few of the cases which I have attended, and in which I have witnessed the most marked effects of the diluted sulphuric acid administered *alone* in diarrhœa. I would here call the attention of your numerous readers to the fact of this remedy having been recommended by the late Dr. Anthony Todd Thompson in diarrhœas. In the "London Dispensatory" of 1837, page 762, there is an article on the Diluted Sulphuric Acid, in which he states, "that when combined with mucilages, it has been beneficially given in passive diarrhœas, operating on the relaxed nervous coat of the intestine as an astringent. The usual dose is from ten to thirty minims, but this dose *may be very often repeated*."

I hope, Sir, that the publication of the following cases may be the means of inducing others to try this invaluable agent in cholera and diarrhœa, and report the result of their observations in your widely-circulated journal.

Allow me to remark, that sulphuric acid varies in *quality, purity, specific gravity, and price*, and therefore care should be taken in its selection. My mode of prescribing it for an adult is to give half a drachm of the diluted acid (P. L.) in ten drachms of water, for

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the first dose, and to continue twenty minims after every loose stool.

I am, Sir, your obedient servant,

WILLIAM GRIFFITH.

CASE 1.—John G——, No. 6, Belgrave-buildings, aged forty-eight, was seized on Sunday evening, the 24th of August, with violent vomiting and purging, attended with great pain in the bowels. Pulse weak, skin cold, and countenance very pallid. Ordered to bed, and to take half a drachm of diluted sulphuric acid (P. L.) in ten drachms of water. When I called at his house early on Monday morning, his wife informed me that he was quite well, and had gone to work.

CASE 2.—Charles P—— was desired to come to me on Friday, the 29th August, by the Rev. Mr. Brown, of Halkin-street. He was labouring under diarrhœa, which had been going on for some weeks. Gave him one dose similar to the above, and told him to come the next day if not relieved. He did not call until Sunday morning, when he stated there had been no action of the bowels since he swallowed the acid. Has not called again.

CASE 3.—Charles B——, aged twenty-two, came to my house on Sunday evening, the 31st of August. Complained of vomiting and purging. The diarrhœa had been going on for four days. Gave him half a drachm of the acid in water, with orders to come again if necessary. Up to the time of writing this account I have not heard from him.

CASE 4.—Ellen J——, aged twenty-four, of No. 8, Eaton-court, consulted me on the 4th of September. Had diarrhœa thirty hours, with considerable pain in the bowels, and nausea. Had twelve motions during the last four hours. She had a mixture, with two drachms of the acid in six ounces of water, with directions to take three tablespoonfuls directly, and two tablespoonfuls after every loose stool.

Sept. 5th.—Had five motions in the last twenty-four hours. Free from pain and nausea. Medicine to be continued.

6th.—Bowels regular. Discharge cured.

CASE 5.—Elizabeth W——, aged forty, living at No. 5, Belgrave-buildings, came to me on the 4th of September. Diarrhœa two days, with griping pains; vomiting and headache. Ordered her the acid as in the other cases.

Sept. 5th.—Much relieved.

6th.—Cured.

CASE 6.—Thomas L——, aged seven, of No. 8, Eaton-court, was seen by me on the 4th of September. Had diarrhœa two days. Prescribed for him—Diluted sulphuric acid, twenty-five minims; water, four ounces. Mix. One large spoonful to be taken after every loose stool. He took three doses, and is perfectly well.

CASE 7.—J. W——, aged forty, residing at No. 8, Belgrave-buildings, had vomiting and purging of a severe nature, attended with pain in the bowels.—These symptoms yielded to half a drachm of the acid.

CASE 8.—During the night of Saturday last, I was called out of bed to a lady in Wilton-street, whom I have attended for many years. I found her in a state of great agony, suffering from violent spasms in the bowels, constant vomiting, great prostration, with diarrhœa of three days' standing. I gave her half a drachm of the diluted acid in water, and sat at her bedside for two hours, when I left her, free from pain and sickness.

I saw her on Sunday morning, at ten. There had been no vomiting; neither had she had one motion since she had taken the acid, but she complained of nausea. Ordered her twenty minims of the acid. I saw her in the evening, at seven. There had been one comfortable evacuation; pulse improved; tongue clean; nausea subsided.

At my morning visit, I was consulted by her daughter, a young lady, aged seventeen, who was (after I had left her mother in the night) attacked with vomiting and purging, attended with griping pains. I gave her twenty minims of the acid, with directions to repeat it if necessary. At my visit at seven in the evening, I found the vomiting had quite ceased, and there had been no action of the bowels after taking the above dose. The patient was free from pain.

Monday morning: Mother and daughter perfectly free from diarrhœa, pain, vomiting, and nausea. Directed the acid to be discontinued.

TREATMENT OF DIARRHŒA AND CHOLERA BY SULPHURIC ACID.

To the Editor of THE LANCET.

SIR,—Having used the sulphuric acid pretty freely during the past month, it may not be uninstructive very briefly to record my impression as to the description of cases to which this admirable remedy is more strictly applicable.

In Glossop, as well as in many of the manufacturing localities surrounding Manchester, we have had, during the splendid autumnal month just closed, multitudes of hasty cases, to which indiscriminately have been applied the terms "bowel complaint," "English cholera," "diarrhœa," "vomiting and purging," the two latter terms being pretty constantly a correct description of the more prominent symptoms. Few cases have proved fatal: happily, in our practice none; though many aged persons have suffered severely, still recovering from the debility produced by cramp and profuse watery purging more rapidly than could have been anticipated. In several instances of this latter class (seen by my partner, Dr. Hunt, as well as by myself) the acid, to use his own words, has acted "*like a charm*," and in none have we had recourse to any other remedy,—subduing cramp, restraining vomiting, rousing the pulse, and with it the heat of surface,—supporting, in fact, the whole vital energies, and apparently effecting this by checking profuse watery secretion, and its consequent discharge from the bowels.

Mr. Griffith, in your last number, has referred to the recommendation of a writer on medical therapeutics, the late Dr. A. T. Thomson, who prescribed the acid in "*passive*" diarrhœa. I conceive such an authority would never have dreamed of its use in cases simulating or closely resembling cholera as seen unmistakably by me, both in India and England.

One thing is certain—the acid is inadmissible *where the purging is decidedly dysenteric*. We have then found the ordinary remedies, such as Dover's powder, combined with the "mercury-with-chalk," answer better.

Another thing is worth recording. It may be given advantageously in freer doses than Mr. Griffith supposes. Our formula is—Half an ounce of the dilute acid of the London Pharmacopœia to seven ounces and a half of water. This may be taken in divided doses of an ounce every two hours, or even more frequently should the first doses be rejected from the stomach, or the purging be frequent. Some cases will undoubtedly give way to opiates; but they leave headache, a foul tongue, and fever.

Into the question of the pathology of this affection I will not enter. Your publication is valuable to practitioners precisely in proportion as its contents are *practical*. Hospital reports are necessarily routine cases, and are statistically worth recording; but no

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man has a right to encumber the pages of a medical periodical with mere theories, or a string of common cases, presenting no peculiarity of practice.

I have presented you with the results of the treatment of at least sixty cases, and think the knowledge of the value of the acid (using proper discrimination in the avoidance of inflammatory dysentery) a great and most valuable fact—one forming the material out of which medical weekly serials are best, because most usefully, compounded.

I remain, Sir, yours respectfully,

J. Ashbury Smith, M.R.C.S.

TREATMENT OF DIARRHŒA BY SULPHURIC ACID.

To the Editor of The Lancet.

In complaints so prevalent, so fatal in their consequences, and so open to diversity of opinion as to their pathology, as cholera and diarrhœa, observations on the beneficial effects of any given remedy are worth all the hypotheses in the world; and by the man engaged in actual practice, dissatisfied as he is but too frequently with the treatment of these affections deduced from theory, will be hailed with the greatest satisfaction. It is however, only after repeated successes that the greater part of the profession can be induced to place confidence in, or give trial to a new remedy. Hence the necessity of recording in a public journal the experience of those more bold, who have been first to test the value of an original proposition. On this account, I am induced to add my mite of attestation to the efficacy of dilute sulphuric acid in passive diarrhœa.

During the present season some hundreds of cases have fallen under my care, the majority of which have readily yielded to the usual treatment—chalk, kino, tincture of opium, &c. Still from time to time, more obstinate cases presented themselves, in which these things seemed altogether useless. When the first notice of the sulphuric acid plan was inserted in The Lancet, I chanced to be tormented with a very obstinate case, of three weeks' standing. The subject, a child of five years, was in the last stage of prostration, from the constant drain on the system: every means prescribed had failed to afford anything more than temporary relief. I gave the sulphuric acid, diluted in fifteen-drop doses, every hour, and was no less gratified than surprised to find, the next day, very considerable improvement, the purging reduced in frequency to three hours or longer intervals. In short, by continuing the treatment another day, this apparently moribund child was restored to life and ultimately to health. Encouraged by this success, I have since that time given the acid freely, (occasionally combined with tincture of opium,) and have been equally satisfied with the result. In cases, however, in which we have much straining and pain, and other dysenteric symptoms, I have found the acid comparatively valueless. In conclusion, I would observe, that another advantage, of no little importance in the treatment of children, attends the use of this remedy,—i.e., it can be made grateful and pleasant to the palate with a little syrup.

G. B. Payne, M.D.

MEDICAL NOMENCLATURE.

To the Editor of The Lancet.

Sir,—The adoption of a scientific nomenclature would tend to a great saving of critical ink and angry discussion. We cannot hope, perhaps, for the general adoption of new names by those who are wedded to old terms, or are too slothful to learn a new alphabet. I am anxious, however, to make two propositions, if you allow me.

The word *cholera* has been the source of error and confusion, both with the profession and the public, to this hour. It is a sad misnomer; for when the flow of bile is established, convalescence may be confidently hoped for. The privative term *a* cholera points at once to the true pathology and practice.

The word *variolaid* is equally wrong. The modified variola is not merely *like* small-pox, but it *is* small pox, and will produce it by exposure or inoculation, in its most malignant form. Being the same in kind, though different in degree, it should be termed *variella*, and the appendage from the Greek, implying mere resemblance, altogether discarded.

I am, Sir, your obedient servant,

Walter C. Dendy.

Medical Facts, News, Items, &c.

Testimonial to Robert Gardiner Hill, Esq.—On the evening of Wednesday week last, the splendid testimonial purchased by subscription, by the friends of Mr. Robert Gardiner Hill, the originator of the non-restraint system, was presented at a banquet held at the Great Northern Hotel, in Lincoln, to that gentleman, in the presence of a numerous and fashionable circle of ladies and gentlemen, gathered together to do honour to the occasion. The testimonial consisted of a handsome silver centre-piece. The mayor, in presenting the testimonial, spoke in flattering terms of the great services rendered to the humane cause of non-restraint in cases of lunacy. He stated that the testimonial had been subscribed to, not only by the personal friends of Mr. Hill, but by a number of the medical profession scattered over England, in justice to Mr. Hill. Mr. Hill returned thanks in a speech of much eloquence and ability. Several other gentlemen addressed the meeting, which was respectably and numerously attended. The inscription on the testimonial is as follows:—

"Presented, together with a Silver Tea Service, to Robert Gardiner Hill, Esq., M.R.C.S. Eng., Author and Originator of the Total Abolition of Restraint in the Treatment of the Insane, now commonly called the 'Non-restraint System,' by a number of Subscribers, medical and general, from all parts of the kingdom; in token of their admiration of the talent which could devise, and the energy and patient perseverance which, despite of prejudice, opposition, and jealousy, could carry out a system fraught with results so eminently beneficial to mankind."

This is engraven on one side of the centre-piece; on the other side is inscribed the following extracts from the Annual Reports of the Lincoln Lunatic Asylum:—

"The Governors never expressed a wish for the extinction of restraints; they never expected it; not one of them deemed it possible."

"It was 'Mr. Hill who had the courage to broach the original and invaluable idea, that the use of instruments might be wholly dispensed with.'—Sir E. Ff. Bromhead, Bart., Vice-President of the Lincoln Asylum."

"The real honor belonged to Mr. Hill, of the Lincoln Asylum."—Dr. Charlesworth.

Poisoning by Mushrooms.—Bruges, Nov. 10.—Two highly respected officers of the Belgian Cuirassiers, quartered at Bruges, died on Tuesday under circumstances which ought to be made known as publicly as possible. They were in perfect health on Monday last. On Tuesday they dined in their quar-

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ters, and ordered some mushrooms dressed in some favourite sauce for dinner, of which they both partook. A few hours afterwards they were both taken ill of a horrible and agonizing colic, which before night became so alarming that medical assistance was sent for, when it became the opinion of the doctors that the sufferers had been poisoned by the mushrooms.—Every effort was made to save them, but without effect; after suffering the most horrible agonies the whole night, during which one of them broke his back from the violence of his convulsions, they both expired towards morning, and were buried with military honours yesterday. So great was the interest taken in the fate of these distinguished officers, that nearly the whole town assisted at the funeral; the crowd was immense, and most of their comrades wept bitterly. But the most fearful circumstance connected with the case is, the declaration of several medical men and chemists, that the poison of the mushroom is really contained in the true *Agaricus compestris*, or common mushroom, after a certain stage of growth; and Professor Orfila has hinted at the same in his *Book on Poisons*. This, if a fact, ought to be generally made known at this season of the year.—*Times*.

PRIZES TO EPILEPTIC PATIENTS AT THE SALPETRIERE, PARIS.—A very interesting distribution of prizes has just taken place at the Salpetriere, amongst the female idiots and epileptic patients under the care of Dr. Mitivié. These prizes were given to such of them as had been distinguished by cleanliness, industry, by the care they had taken of little children, &c. There were prizes given to those who had excelled in gymnastics or dancing. The director-in-chief of the public charities of Paris was present, as well as all the patients belonging to this section of the hospital. A few of the women took their part in a little theatrical piece which had been written for the occasion, and no one unacquainted with the place would have suspected that the performance was being supported by the inmates of an asylum.

THE QUARANTINE CONGRESS AT PARIS.—It is to be hoped that the labours of the eminent men whom some of the European states have sent to Paris, to frame laws and regulations regarding Quarantine, in keeping with the scientific views of the present age, will have a satisfactory result. The congress has been assembled for the last two months, and is composed as follows: Austria, Dr. Meni, chief physician of the province of Dalmatia, author of several esteemed works; Tuscany, Dr. Betti, Professor of Surgery at Florence, and for a long time at the head of the sanitary affairs of the country; Naples, Dr. Carbonaro; England, Dr. Sutherland, whose knowledge of sanitary matters we need not dwell upon; Genoa, Dr. Bò; Greece, Dr. Costi.

PROFESSOR GORINI.—This gentleman, who is professor of natural history at the University of Lodi, made, before a circle of private friends, two nights ago, a very remarkable experiment illustrative of his theory as to the formation of mountains. He melts some substances, known only to himself, in a vessel, and allows the liquid to cool. At first it presents an even surface, but a portion continues to ooze up from beneath, and gradually elevations are formed, until at length ranges and chains of hills are formed, exactly corresponding in shape with those which are found on the earth. Even to the stratification the resemblance is complete, and M. Gorini can produce on a small scale the phenomena of volcanoes and earthquakes. He contends, therefore, that the inequalities on the face of the globe are the result of certain materials, first reduced by the application of heat to a liquid state, and then allowed gradually to consolidate. In another and more practically useful field of research the learned professor has developed some very important facts. He has succeeded to a most surprising extent in preserving animal matter from decay without resorting to any known process for that purpose. Specimens are shown by him of portions of the human body, which, without any alteration in their natural appearance, have been exposed to the action of the atmosphere for six and seven years; and he states that at a trifling cost he can keep meat for any length of time in such a way that it can be eaten quite fresh. The importance of such a discovery, if on a practical investigation it is found to answer, will be more readily understood when it is remembered that the flocks of sheep in Australia are boiled down into tallow, their flesh being otherwise almost valueless, and that in South America vast herds of cattle are annually slaughtered for the sake of their hides alone. —*Times*.

MEDICAL EDUCATION IN SPAIN.—We find in the *Boletin de Medicina*, &c., the account of a peculiar case referring to medical education, which was lately brought before the University of Madrid. The authorities of the medical faculty were applied to by two young Spaniards, who had just completed their education at Montpellier, where they had taken their doctor's degree. They prayed that by paying the fees, and passing the examinations, they might be admitted members of the Faculty of Madrid, though they had been wholly educated in France. This request was not complied with, as it was important, said the Council of the Faculty, that no encouragement should be given to the natives of Spain to obtain their medical education and degrees in other countries.

MEDICAL SOCIETY OF LONDON.—Saturday, Nov. 1, 1851.—This was a general meeting of the society. Little business was transacted. Votes of thanks were passed with acclamation to Mr. Guthrie and Dr. G. Owen Rees for the Lettsomian lectures delivered by them during the past session. A vote of thanks was also carried amid great applause to W. N. Lettsom, Esq., the heir-at-law of the late Dr. Lettsom, who had handsomely and generously given up his reversionary interest in the valuable house in Bolt-court, left to the society, with certain contingencies, by the late Dr. Lettsom. This generous conduct on the part of Mr. Lettsom enables the trustess of the society to let the house, the rent of which will go into the society's coffers.

EPIDEMIOLOGICAL SOCIETY.—The first ordinary meeting of the present session was held at the house of the Royal Medical and Chirurgical Society, 53, Berners-street, on Monday, the 3rd of November, Dr. Babington in the chair.

An address was read by the President, in which he stated the progress of the Society since first he had the honour of addressing the members beneath the same roof in December last, and the nature and operations of the various committees formed since that period.

A paper was read by the Honorary Secretary, written by Mr. Gardner, of Notting-hill, "On Small-pox and Vaccination," which elicited applause.

Mr. Grainger spoke at some length. Dr. Babington and Dr. Hare also took part in the discussion.

Several new members and corresponding members were proposed. The meeting was well attended.

KOSSUTH AND SIR JAMES CLARK.—Sir James Clark has waited on the distinguished Hungarian refugee, and kindly proffered his professional services. We do not know whether the offer was accepted.

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